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160 Acres on Little River only two miles from Winthrop, 125-under hog tight wire fence; about 70 in cultivation; house, etc. Only \$1,000 down, balance 5 years 6 per cent interest.

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Write for list of 20 farms which I own and am offering at reduced prices on liberal terms to white people only.

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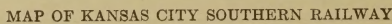
F. E. ROESLER, Editor

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The Woodland Farmer

The oldest generation of farmers will no doubt remember the days when it was considered the height of folly to locate a farm anywhere except in the timber. The early settlers brought the notion with them and it was religiously adhered to up to the close of the Civil War. The usual argument was that land which could not sustain a timber growth was, as a matter of course, barren and suitable at best only for pasturage. The thicker the undergrowth and the more difficult the land was to clear for purposes of tillage the more valuable was it deemed to be. The prairies of Illinois and Iowa were settled long after the timber lands in the same States had been cleared, and it was with more or less misgiving that the prairie lands were ultimately brought under cultivation. The same ideas might have prevailed until the present day had it not been for the vigorous work of the old land grant railroads, whose holdings lay almost entirely in the prairie States. They overcame the prejudice against prairie lands by establishing hundreds of experimental farms and carried on so vigorous an immigration campaign that they settled more land in twenty years than had been settled in a century and a half before. The prairie lands of Kansas, Nebraska, Iowa, the Dakotas and Texas received the several hundred thousand immigrant families and the more convenient timber lands of the Southern States were for a time entirely forgotten. Printers' ink and thousands of active immigration agents kept the prairie lands uppermost in the minds of the intending settler, and the immigration work done in those days built up a splendid array of prosperous States, magnificent cities teeming with population. The work done in the seventies abides to this day and the Western prairie States are still the Mecca of a host of homeseekers.

As a matter of fact, the settler on the Western prairie lands had no advantage whatever over the dweller in the timber. While he saved the expense of clearing in many instances, he paid heavily for his building material, his fencing and fuel. His range of production was limited in the main to corn, wheat, oats and live stock, except in central Texas, where he could also produce cotton. Every neighbor was a competitor in the market, and the great distance which

had to be traversed to reach a market subjected him to a heavy transportation charge. The distance from markets for a number of years was against him, though the railways carried much of his product at a loss. This in time was remedied in the growth of the Western cities and the development of other local resources which brought in a large consuming population. The prairie country having a less rainfall than that covered with timber, was occasionally visited by drouth, and on the whole the prairie farmer was dealing with conditions which did not worry the man in the timber. Of course, there were certain real or fancied advantages. He could see the sun rise half an hour earlier than could the man in the timber, and this was worth a dollar an acre; he could see the smoke of a prairie fire fifty miles and could watch it rain in the next county when he needed some on his own corn. Having no natural protection from the blizzard for either himself or his cattle, he could wear extra heavy clothes, feed his stove with coal worth \$7 per ton and stuff his cattle with extra rations of corn to keep them from freezing to death. His barn cost him more than his dwelling. Still he was happy; he lived in a bracing climate and his farm was getting more valuable every day, and he could sell at a good figure any day. Immigration was coming his way and if he made no profit on his crops he could make it on the land, and this was just as good, so long as there was a profit.

The stock argument of the old-time immigration agent was the healthfulness of the prairie country and no medical college graduate could equal him when it came to the quoting of health statistics. "No malaria," "no fever," "no calomel," "no quinine" was the universal legend on the flaring posters and the tons of gorgeous printed matter with which the Eastern States were blanketed just bristled with health statistics. It is a solemn fact, though, nevertheless, that the settler on the Western prairies swallowed just as much calomel and quinine as did his brother on the river bottoms or the lowlands.

The health conditions of the time were largely due to the hardships incident to pioneer life. The settlements were too new to provide at once the hygienic safeguards

now in common use. The country was in a primitive condition, full of decaying vegetation; the natural drainage channels choked with fallen and rotting timber. Stagnant pools were everywhere, and wherever there was stagnant water, mosquitoes, the carriers of malaria, fever and ague, etc., were abundant. The pioneers of one and two generations ago cleared the water channels and in their days calomel and quinine were undisguised blessings. The modern conveniences of the home and the farm, the pioneering work of the old time settlers and a better knowledge on part of the people of what is needful for the preservation of health, have practically eliminated malaria. The older farms of the river bottoms of Indiana, Illinois, eastern Arkansas, Missouri and other States of the Mississippi valley are practically free from climatic disorders.

In the long neglected Southern woodlands the farmer plodded along his even way, raising his corn, cotton and hogs. The scant immigration did not materially increase land values and lands could and can yet be obtained at very moderate prices. The growing season was a long one and little effort was necessary to make a living. If there was timber on his land he had an abundance of building material, all the fencing he could possibly use, fuel enough to last the next generation, good spring water, water for his household and stock, open pasturage ten months in the year and a short, mild winter which could not possibly damage his livestock. One or two months' feeding was all that was required to keep his stock in excellent condition. He possessed a range of production entirely beyond his ken. Corn, cotton, sugar cane, sweet and Irish potatoes, some fruits and vegetables were the staple crops. The hogs hustled for their living in the midst of the forests, and when pork was wanted the farmer went a gunning. His cattle took care of themselves, excepting the family milch cow, which was usually bribed with an extra feed to induce her to come home and be milked.

The extension of the railways through the Southern woodlands instilled new life and new ambitions. The ability to reach old established markets quickly and cheaply made possible the development of agricultural resources undreamed of before. The staple crop, cotton, still goes to market in the old channels, but other crops of greater acre value are now produced and find ready sale. Thousands of carloads of peaches, potatoes, tomatoes, cabbages, melons, cantaloupes and berries go North from regions now that

were formerly entirely devoted to the production of cotton. The breeds of live stock have been vastly improved and hold their own in any market. Corn and forage production has enormously increased and clover, alfalfa, cow peas, sorghum, rye, oats, rape, peanut straw are very extensively grown, and live stock fare sumptuously. Natural hay land is abundant, but there is practically no limit to which the profitable production of forage cannot be carried. Winter pasturage is easily maintained by sowing rye, wheat or oats. Two or three crops are grown successfully on the same land the same season and a small acreage goes much further in producing the wherewithal to live than in any more northerly latitude.

One of the hardest lessons for a prospective settler from the Western prairie States to learn is that 160 acres of land are not necessary for success and sometimes can be a drawback. The Western prairie farmer, for climatic reasons, is compelled to grow crops which in a large measure are bulky and cheap. The Texas, Louisiana or Arkansas farmer raises just enough of these to supply his own needs and those of his stock. In addition to these he can grow a variety of other crops, among them Irish potatoes, that will net him \$75 to \$100 per acre, cotton yielding from \$30 to \$65 per acre, melons yielding from \$75 to \$100, strawberries yielding from \$65 to \$250 and tomatoes yielding from \$75 to \$150 per acre, sugar cane made into syrup yielding from \$100 to \$200 per acre. If he plants a peach orchard his crop will be worth from \$100 to \$200 per acre. He can carry about twice as many head of live stock on a given area than can a Northern farmer. Acre for acre, he can clear more cash money than can any Northern farmer, who must contend with a short growing season, and he can do this on land at the present time which, unimproved, will not cost him more than \$15 to \$30 per acre.

Of the Southern States having large areas of country still thinly settled, western Arkansas, eastern Texas, eastern Oklahoma, western Louisiana at the present time present the greatest attractions in the way of fertile lands at very low prices. It is at present the only section of the United States where a man, relying on his ability to work and a little money in cash, can gain a foothold and work out his salvation. There are more ways to earn a living by agriculture open to him here and less working capital is needed to get a start than anywhere else.

Delaware County, Oklahoma

Delaware county borders on the west Arkansas line, which separates it from McDonald county in Missouri and Benton county in Arkansas. It is in the northeast corner of the state, being bounded on the north by Ottawa county and on the south by Adair county, Oklahoma. Elk river and Spavinaw creek run through the northern half and numerous small creeks, mostly tributaries of the streams named, are found in all parts of the county. All of them are swiftly flowing mountain streams fed by springs. The area of the county is 794 square miles. In 1910 it had 11,469 inhabitants.

Mr. W. P. Camp, route 1, Salina, Oklahoma, who has resided in Oklahoma twenty-eight years and has spent the last three years in Delaware county, writes about its agricultural possibilities, in substance, as follows: "Since moving to Delaware county, three years ago, the writer finds that the agricultural possibilities of the county have been barely touched as yet. Less than one-tenth of the area of the county is under cultivation and that one-tenth does not produce one-fourth of the crops that it is capable of producing. Under the present system of cultivation the best bottom land is only producing about twenty bushels of corn per acre, while it is possible, with improved methods of farming, to make this same land produce from eighty to one hundred bushels per acre. Last year the writer, by using up-to-date methods on fifteen acres of land planted to corn, produced a yield of eighty bushels an acre. This same land had been farmed for five years under the old system of scratching the surface, and yielded only twenty-five bushels of corn with the most favorable year.

"Much of the bottom land in Delaware county is well adapted to the cultivation of alfalfa, if cleared and put in shape for the crop. There may be some instances where the soil would need a little "doctoring" before the crop could be successfully grown. The writer put out four acres to alfalfa three years ago and found that the soil had to be inoculated and limed before the crop would give the best results. The second year of growth was as fine as the writer saw anywhere in the state. It made four cuttings of two tons to the cutting per acre, or a total

of eight tons per acre during the year. This crop should be grown more extensively in the county, because hay is high-priced every winter. For the past three winters tame hay of any kind has sold readily at \$20 per ton in this county.

"Red clover has been grown in a small way in Delaware county for eight or ten years. It is adapted to a wider range of soils than alfalfa. It grows well on all the bottom lands and has been grown quite successfully on the hillside lands. In fact, it seems to do better on hillside land than on low bottom land. In most cases the drainage is better on the hillside land and this is probably the cause for its better growth on this type of soils.

"Corn has been grown in the county by the Indians for more than sixty years and with but little effort on part of the growers. The only trouble with the crop at present is that the crop needs better seed, better preparation and cultivation and a larger area to the crop. The writer talked with one old Indian who had planted the same seed on the same land continuously for forty years. He was talked into the notion of planting new seed corn last year and, as a consequence, got a little better yield than usual. No doubt many other Indians could be found who have been planting the same seed corn on the same land for twenty or twenty-five years. This is one of the causes for the very low yield in this section of the country at present. Another cause is to be found in the manner the land is prepared and cultivated.

"In preparing for a corn crop the work of breaking the land is never begun until spring. Then the land is broken out about three inches deep with a two-horse, ten inch plow. If the land happens to be stumpy, or has roots in it, and the plow happens to strike one of these and jumps out of the ground, it is allowed to drag quite a distance before it is put back in the land. This leaves a streak of hard unbroken land which remains in this condition the remainder of the year. The more stumps and roots there are in the land the more numerous are these unbroken hard streaks of soil. I have seen some very stumpy land, nearly one-half of which was unbroken. After the land is turned, in the position mentioned above, a

light harrow, made from a forked tree trunk with iron teeth driven into it, is used for smoothing off the land. After the harrowing process, the land is laid off into three foot rows with a Georgia stock plow, and the corn dropped three feet apart in the row by hand. When the corn gets to be about eight inches high the farmer goes in with his double-shovel plow and scratches through it twice and the crop is laid by for the season. No more work is applied to it. If it makes a few bushels per acre, it is all right; if not, the farmer goes into the hills and makes railroad ties for a living. With a good method of farming Delaware county could ship out several hundred carloads of corn each year, or better still, feed a great number of hogs and other stock; whereas, at present, there is not enough corn raised in the county for home consumption.

"Cotton, in small patches, has been grown in Delaware county for ten or twelve years. The plant grows well and fruits well under favorable conditions. The writer talked with a farmer who had grown cotton in this county for ten years and this farmer stated that he had never had a yield of less than eight hundred pounds of seed cotton per acre and has had yields of as high as 2200 pounds per acre on new land. If this is true it beats any of the regular cotton counties in the southern part of the state. A ten year average of 750 pounds of seed cotton is all they can claim. Ten acres of cotton yielding 800 pounds per acre, would buy forty acres of the best undeveloped land in Delaware county. Good undeveloped land sells at about ten dollars per acre. This crop should be more generally grown and the farmers of the county should have at least five hundred bales to ship each year.

"White potatoes or Irish potatoes, as they are generally called in this locality, yield very well with good preparation and cultivation. This year the writer planted one-fifth of an acre to potatoes and obtained a yield of fifty bushels from the plot. They were all nice, smooth, marketable potatoes and would have readily sold on the market for one dollar and fifty cents per bushel. The yields last year and the year before were not quite so good but averaged around two hundred bushels per acre. The writer honestly believes that Delaware county

would fully equal the Fort Gibson area as a potato producer if this industry was properly developed. The possibilities in this direction are highly attractive.

"Sweet potatoes grow well in this county. The writer is confident that they will yield fully as well as Irish potatoes. Our black gravelly soils seem to be well adapted to this crop. Turnips are good for a hundred bushels an acre and require very little effort on the part of the farmer.

"Sorghum is planted for both syrup and forage and gives a good yield of both. The writer has never planted any for syrup but has talked with a number of farmers and all of them say that an average of 250 gallon is obtained per acre. For hay and fodder four tons is a fair average on good bottom land.

"Kaffir corn has not been grown to any great extent in Delaware county and therefore no conclusions can be drawn as to what the crop would do under favorable conditions. Those who have planted kaffir corn have used it as a catch crop after wheat or oats, with but very little preparation of the land. With good preparation of the land and with the crop planted early, the writer believes that this would prove a fairly good crop on the prairie land in the north and east part of the county. The writer has never advocated the cultivation of either kaffir corn or any of the non-saccharine sorghums on land that will produce Indian corn."

As stated in the beginning of this article, Delaware county adjoins Benton county, Arkansas and McDonald county, Missouri, on the east. The northern part can be reached by rail from Gravette, Ark., on the Kansas City Southern Railway; the central and southern part by ordinary vehicles from Decatur, Sulphur Springs, Gentry and Siloam Springs in Benton county, Arkansas, and from Anderson and other points in McDonald county, Mo. The national government has quarterly sales of Indian lands in eastern Oklahoma. These lands are located in several counties and belong to individual Indians. Parties interested can obtain descriptions of the various tracts offered by addressing Hon. Gabe E. Parker, superintendent to the Five Civilized Tribes, Muskogee, Oklahoma.



Climate and Health

In West Louisiana, East Texas and the Gulf Coast

The allied questions of climate and health are important everywhere. The climate of Western Louisiana is one of its most attractive features. It is a moderately warm, temperate climatic zone. It lacks the killing heat of the northern latitudes. Sunstroke is an unknown malady. The winters are never severe, as the mercury seldom sinks to the freezing point and never remains there long when it does. About once in seven or eight years there is freezing weather, forming thin coats of ice, and occasionally there is some snow, but this condition rarely lasts longer than a day or two. The ground never freezes, and field work can be done all winter. Bright sunshine prevails over 300 days in the year, and there is no idle season. It is a climate free from extremes. It has more warm days than the climate of the northern states; but few, if any, of the days are ever as hot as those of a northern summer.

The average monthly and annual temperatures at Lake Charles, La.—and this holds good for Beaumont and Port Arthur, Tex., also—during the past twelve years are as follows: January, 51.9 degrees; February, 53.9; March, 59.6; April, 67.4; May, 73.8; June, 79.9; July, 80.9; August, 80.6; September, 77.2; October, 68.7; November, 59.3; December, 53.5; annual average, 67.2 degrees. For Shreveport, La.: January, 46.2; February, 50.0; March, 58.2; April, 65.8; May, 73.2; June, 79.6; July, 82.1; August, 81.4; September, 75.7; October, 65.6; November, 55.3; December, 48.9; annual average, 65.2 degrees. The highest temperature observed at Bismarck, North Dakota, was in May 96 degrees; June, 99.0; July, 106; August, 105; September, 102. At Shreveport, La., in May, 101; June, 104; July, 107; August, 106; September, 101 degrees; from which it might be inferred that it is comfortably warm in both latitudes in the good old summer time. The average date of killing frosts at Bismarck, N. D., is September 11th, at Shreveport, November 11th and at New Orleans December 10th. The latest date of killing spring frosts at

Bismarck, N. D., is June 7th; Shreveport, La., April 2d; New Orleans, March 27th.

The prevailing gulf breezes temper both the summer and winter seasons of Louisiana to a marked degree. During the summer months shortly after sunrise a fresh wind starts inland from the Gulf of Mexico, and continues throughout the day and late into the night. These winds appear in March and disappear in November, being most extensive from May to October, when they extend northward to the Dakotas. They are cool, pure, fresh and invigorating and add much to the comfort of the residents, indeed, they attract many people who regard the coast as a very pleasant summer resort.

Public health in Louisiana and Texas is exceptionally good. The death rate per thousand inhabitants in the city population of the United States is 17.8. In Beaumont, Texas, it is 12.8; in Lake Charles, La., 14, from which 1.5 can be deducted for deaths resulting from industrial accidents. The health record of Shreveport is equally good. Measles, whooping cough and scarlet fever are rarely heard of and the same should be said of bronchitis. Virulent fevers of the typhoid type, diphtheria and children's diseases common to cold climates occur rarely and are not severe. Smallpox occurs occasionally, but fatal cases are seldom heard of. In former years malarial fever occurred in some localities, but the drainage of wet places, screening of houses and elimination of the mosquito have practically eradicated this disease.

There are many, endowed with the vigor of youth and a robust health, who revel in a blizzard and feel all the better for it, but there are also many others to whom exposure to cold, damp weather for a period of time is a positive injury and to whom a climate free from extremes of heat and cold is essential for health and comfort.

These, beyond question, could improve their physical condition by sojourning in the south during the winter months.

Colonizing Forty Thousand Acres.

One of the largest colonizing enterprises ever undertaken along the line of the Kansas City Southern is being successfully handled by the Payne Investment Company of Omaha.

They are selling a tract of 40,000 acres just south of Lake Charles, La., one of the terminals of the Kansas City Southern. It is all prairie land, not cut-over, without stumps, stones or swamps.

For a number of years this large tract has been held for speculation and given over to pasture. When the owner died a number of the progressive citizens of Lake Charles conceived the idea of having it subdivided and sold to actual farmers. To this end the Prairie Farms Land Co. was organized and the land was bought.

Payne Investment Co. has had a wide experience in colonizing lands and at the solicitation of the owners, members of the company made a careful investigation of the land and the surrounding country and finally undertook the sale, beginning the campaign in the early fall. They have already sold about 3,000 acres, all to actual farmers. It is a part of the contract for purchase that the land be improved and farmed.

The land lies just south of Lake Charles, from four to ten miles, and a paved road leads from the city to the land and along two sides of it. Calcasieu Parish, in which the city and land are located, takes great pride in its paved roads, having about eighty miles of well built paved highways and is planning for more.

Unquestionably this land will sell rapidly. The location cannot be better, being so close to an enterprising, growing city, such as Lake Charles. There is the best of transportation, good rail connection to the north, a navigable river close by and convenient to the Gulf. The Inter-Coastal canal is only a short distance from the tract.

Speculators are not invited to buy, it being the aim of the owners of the land to have it settled for the ultimate good of Lake Charles. The prices are low, starting at \$35 an acre with a view to raising the prices to \$37.50 per acre after the first 5,000 acres are sold. There will possibly be another raise of \$2.50 an acre after the next unit of 5,000 is sold.

In advertising this country considerable stress is laid on the fact that Louisiana is a corn state and that corn land is getting

scarce. Attention is also called to the fact that no section of the United States produces a greater diversity of crops. Louisiana has been unusually prosperous the past year by reason of abundant production and high prices for four of the great staples—Corn, Cotton, Rice and Sugar.

Undoubtedly this large tract, known as Prairie Farm Lands, will in a few years be the homes of many prosperous northern farmers.

YOUTH.

(From Bulletin American Iron & Steel Association.)

Youth is not a time of life; it is a state of mind. It is not a matter of ripe cheeks, red lips, and supple knees; it is a temper of the will, a quality of the imagination, a vigor of the emotions. It is the freshness of the deep springs of life.

Youth means a temperamental predominance of courage over timidity, of the appetite for adventure over the love of ease. This often exists in a man of fifty more than in a boy of twenty.

Nobody grows old by merely living a number of years. People grow old only by deserting their ideals.

Years wrinkle the skin; but to give up enthusiasm wrinkles the soul.

Worry, doubt, self-distrust, fear and despair—these are the long, long years that bow the heart and turn the greening spirit back to dust.

Whether sixty or sixteen, there is in every human being's heart the lure of wonder, the sweet amazement at the stars and at starlike things and thoughts, the undaunted challenge of events, the unfailing, childlike appetite for what next, and the joy of the game of living. You are as young as your faith, as old as your doubt; as young as your self-confidence, as old as your fear; as young as your hope, as old as your despair.

In the central place of your heart is an evergreen tree; its name is Love. So long as it flourishes you are young. When it dies you are old. In the central place of your heart is a wireless station. So long as it receives messages of beauty, hope, cheer, grandeur, courage and power from God and from your fellow-men, so long are you young.—Adapted from an exchange; author unknown.

Raising Irish Potatoes in Arkansas

"The Packer," a produce dealers journal of Kansas City, Mo., recently received a request from G. A. Stewart & Co., of Sherman, Texas, for information as to the methods employed by Brooks Stevens in producing large yields of fancy potatoes, how the land is fertilized, etc. "The Packer" representative at Fort Smith, visited the Stevens' farm and reports as follows:

Several years ago Mr. Stevens bought an upland farm located on top of one of the Ozark hills in this vicinity. Cotton and corn had been raised on this farm for years and the soil was low in fertility. The soil is light in color, sandy clay loam, having a depth of two to ten feet. It is similar to other upland soils in this vicinity, with just enough drainage to prevent water standing or a cold wet condition. The first year Mr. Stevens bought the farm he let it lie fallow, and turned under the weeds where the soil was rich enough to grow weeds. The next year he began a three-year rotation of wheat, with lespedeza, or Japanese clover; the second year with rye and lespedeza. Where the rye was heavy he cut it, and cut enough hay for his stock, plowing under the crop residue and Japanese clover. He did the same with the wheat land after cutting the grain. Where the rye was light he let it go to seed and this second crop, together with the Japanese clover, made a heavy growth of vegetable matter to plow under, thus enriching the land. The third year rotation was potatoes and Mr. Stevens took special pains in selecting the very best seed to start with and has improved his seed stock each year by replanting from the best.

Prior to this year Mr. Stevens applied potash along with acid phosphate and cotton seed meal, applying practically a ton per acre which, with the clover crops and crop residue, brought the soil up to a high state of fertility. This year he applied a ton per acre of cotton seed meal and acid phosphate, about half and half of each, omitting the potash because of the extremely high price. The farm is in splendid physical condition, having plenty of vegetable matter, humus, nitrogen as well as phosphorus and potash. Of course Mr. Stevens follows clean cultivation, keep-

ing the soil well stirred after rains. The last cultivation was given with a single sweep two weeks before digging, following a good rain.

He plants his seed as soon as the ground is warm enough in the spring, using large potatoes and plenty of seed. The seed is cut in two or three pieces, according to size of the tuber. Potatoes are dug with a regular digger and this year's crop is yielding 200 to 225 bushels per acre from a field of 35 acres. The stock is running fancy and no culls. By rotating the crop the ground is kept free from disease and the Packer man never saw finer stock come out of the ground. They are smooth, clean, practically free from scab, splendid color, five to ten potatoes to the hill and culling not necessary. Mr. Stevens' crop brings the top market prices, selling sometimes on track to the buyers who visit this field, and he frequently accompanies his potatoes to the St. Louis and Chicago markets where he sells to the fancy trade.

Mr. Stevens also grows the improved Triumph watermelon on this same soil, producing melons that weigh 50, 60 and up to 105 pounds each and sells them on the local market at 50c to \$1 per melon. Mr. Stevens figures it costs him from \$35 to \$50 per acre to produce his potatoes but he believes the investment a wise one.

Mr. Stevens' crop, amounting to seventeen cars, was handled by N. J. Collier of Fort Smith. The potatoes were loaded solid through the car; i. e., one solid tier standing with a solid tier lying on top. The containers were new 150-pound sacks and the stock was free from culls, running extra large and smooth. The potatoes were sold to Earl Brothers, of Chicago, and in response to an inquiry made by the Packer man as to the condition in which these potatoes reached the market, quality, prices obtained, etc., Earl Brothers wired as follows:

Chicago, Ill., June 27, 1916.

To The Packer:—With regard to Stevens' crop potatoes which we purchased this year: We consider his stock by far the best Triumphs we have handled this year. We sold the first potatoes he ever put on the Chicago market and believe we sold them at the highest price received for Arkansas potatoes that year. We can always

sell such stock at a premium and our sales this year have proved no exception. Mr. Stevens has the faculty not only of topping the market on his quality, but also sells at the right time and regularly each year, topping the market for the season. He is not only an excellent farmer, but also a first-class business man. If he uses the same

judgment in growing and caring for his crop that he shows in marketing it we do not wonder that he produces the best potatoes in Arkansas and probably in the South. Earl Brothers would appreciate it if other growers would emulate Mr. Stevens' example and produce quality potatoes.

EARL BROTHERS.

Peanuts as Source of Oil Supply

Mr. T. P. Luse, vice-president of the Beaumont (Tex.) Cotton Oil Mill Company, who is interested in the manufacture of oil from peanuts, estimates that there will be from 1200 to 1500 acres planted in peanuts in Jefferson county annually. It is estimated that the total acreage in the state last year was 300,000 acres. Twenty-seven oil mills in Texas will crush peanuts this fall. There is a considerable shortage in greases and the oil is assured of a good market this year. Peanut oil is in many respects superior to olive oil for cooking purposes. The peanut cake is proving valuable for feeding purposes.

The average on peanuts in East Texas last year was forty-two bushels to the acre. The cotton oil companies expect to pay from 70 cents to one dollar per bushel. At 70 cents a farmer can make \$29.40 per acre on the nuts. The hay is worth \$14 per acre. This makes the average per acre \$43.40.

One reason why there has never been any more attention devoted to the growing of peanuts in this immediate section is that there has never been a steady and reliable market for the nuts. The oil mill will furnish that market this year, and it is expected that one of the greatest peanut crops in the history of the county will be grown this year.

The oil mill is sending out the following circular in regard to peanuts:

"Oil mills have brought to the South much of their present prosperity, and have given to the world one of its richest and best feeds, namely cottonseed meal. Along with it goes cottonseed hulls of less food value but at a correspondingly lower price. Also cotton linters which are made into hats, felting, blankets and hundreds of other things. Also cottonseed oils, cooking compounds, salad oils, substitutes for olive oils, butterine, salad dressings and various other things.

"We now come before you with a proposition that is just a little behind that of cotton seed, for while cotton gives us both food and clothes, peanuts are practically so far of food value only. From peanuts we get under favorable conditions a yield of forty to sixty bushels per acre. We secure practically one ton of peanut hay per acre. The peanut meal is as rich as cotton seed meal and the peanut hay has the same food qualities as alfalfa. Isn't this a wonderful plant? A high authority states that peanut oil is of a better edible quality than olive oil. With all this behind it its future is assured. In 1889 there were only 3,588,000 bushels of peanuts produced, in 1909 there were 19,415,000 and we suspect this year there will be 25,000,000 bushels produced. Texas alone will plant over 300,000 acres in peanuts.

"Peanuts are destined to become to our section and sections of sandy soil similar to ours what cotton is to the great black land sections of north and central Texas. This soil is peculiarly adapted to the growing of peanuts, and we firmly believe this solves the question of a successful crop for diversifying for our farmers.

"The small white Spanish peanut is the most productive and the most valuable for milling purposes, thus of course, commanding the highest prices paid. It is the earliest variety, the branches growing upright and the pods clustering about the base of the plant. It is more easily cultivated and harvested than other varieties.

"On well drained soils peanuts should be planted level. The usual practice is to open furrows thirty to thirty-six inches apart, into which fertilizer, when used, is drilled. Soils that are not well drained are usually ridged for peanuts, and when fertilizer is used the ridge is formed directly over the fertilizer and should be partially

harrowed down or flattened by means of a fine tooth harrow before planting.

"Small podded varieties are usually soaked in water over night and planted pods and all. Approximately two bushels of unhulled seed are required to plant an acre, and planted in rows from seven to twelve inches apart, depending somewhat on the variety. Planting should not be done until the ground becomes thoroughly warm in the spring, as little is to be gained by planting peanut seed in cold ground. From April until June 1 is the best time to plant the peanuts.

"Peanuts are cultivated much like corn, cowpeas, etc. Hoeing should be done only

when necessary to keep down the grass and weeds.

"Peanuts should be harvested and stacked to dry. Picking should not be done until the pods have become dry and the peas firm. They can be picked profitably by hand, if they are not grown extensively in your section and there is no thresher. The proper stage to pick the crop is indicated by the tendency of the pods around the base of the plant to shed and the vines to turn yellow. There will usually be enough peanuts left in the ground and wasted to allow you to use it for a hog pasture and fatten your hogs through the winter."

Farming Near Texarkana, Texas

From "A Tale of Two Cities."

From Texarkana, which has an altitude of 332 feet, the country gradually slopes on the north to the valley of Red River, reaching the practically level bottom lands at about six miles from the city. The upland soils are gray sandy loams and loam and clay, merging into brown and black sandy loams and clay in the bottoms of the Red river on the north and east, and the Sulphur river about ten miles to the south of Texarkana.

On the uplands small fruits and vegetables are the most profitable crops and intensive farming, though little practiced here, has brought wonderful results.

At the farm of D. W. Smith, just five miles east of the city, my guest learned something of the methods of growing sweet potatoes and of the profits of this very valuable crop. Mr. Smith grows what is known as the Nancy Hall sweet potato and produces an average of 225 bushels to the acre. Besides selling a large amount of seed stock, he sells on the local market at digging time the larger part of his crop and receives an average of sixty cents per bushel, or better, but by holding them until January, February and March it is quite easy to get \$1.25 per bushel. The value of this toothsome and sugary tuber has only just begun to be recognized in our northern markets and the demand for them has shown a remarkable increase.

Cantaloupes and watermelons are thriving and profitable crops in the sandy loams of

the uplands and bring to the intelligent farmer salesman \$75 to \$125 per acre.

Ribbon cane, a crop indigenous to tropical and semi-tropical countries, is successfully grown here. B. F. Eubanks, four miles west of Texarkana, specializes to some extent in producing pure ribbon cane syrup—a sort of angelic accompaniment to a stack of hot cakes. Mr. Eubanks secures a production of 250 to 300 gallons of syrup per acre of cane and receives therefor sixty cents per gallon at wholesale or seventy-five cents at retail. The cane is grown from stalks or joints, being carefully selected at cutting time, bedded out for the winter and transplanted in the spring.

Sorghum, a member of the cane family, and quite generally known, is both a popular and a profitable crop in this section. W. T. Weeks, living two miles south from Texarkana, produced this year 132 gallons from one acre of sorghum on branch bottom land, without fertilizer, and which yielded \$66 gross.

Irish potatoes are planted early, during January and February, and where land selection and fertilization have been properly observed, yields of 250 bushels have been obtained; market prices are considered good at sixty to seventy-five cents per bushel, although many farmers, through their methods of selling direct to the consumer, secure much higher prices.

Strawberries are a profitable crop on small acreages. J. M. Champion, three miles west of Texarkana, finds it worth while to give the larger part of his time to

this crop and says that \$200 per acre is only a fair yield.

W. J. Saunders, whose farm is less than a mile north of town, has six acres in blackberries and finds a ready sale for this fruit on the local market. The crop brings him approximately \$100 per acre.

Turnip greens may sound rather prosaic, but with an income of \$200 per acre there seems to be something both palatable and practical about this vegetable. That is the amount a number of truckers report as having received this year.

English peas, by reason of our mild winters, are planted with safety in January and bring early returns. Charles Harrington, one of our most successful dairymen and truckers, makes a specialty of this vegetable, which nets him \$150 per acre.

Radishes, lettuce, onions, spinach, turnips and cabbage are all staple crops and a little foresight and management has enabled many of our farmers to make a "killing" by getting these vegetables on the market early in the season.

Tree fruits do well, peaches being closely associated with our sandy lands. Three of the largest peach orchards in the world, representing a total of 7,000 acres, are lo-

cated within a short distance north and south of Texarkana. Plums and pears are also largely grown.

One of the most phenomenal successes in grape growing, which now promises to become a great industry in this section, was demonstrated by Charles Brunner, who harvested last year a yield of \$690 per acre from vines planted in March, 1911, just twenty-eight months old. This year he did equally as well. Located just three miles east of Texarkana on a gravelly hill, he is producing about thirty varieties of grapes of such wonderful quality as to excite the admiration of the most successful vineyardists of California and other grape-growing districts. When you learn that this land cost him but \$30 per acre three years ago and set to grapes and producing, as it is, it cannot be bought today for \$1,000 per acre, you may reflect upon the possibilities of this particular industry in this section. Mr. Brunner formerly followed the system of culture which he learned during his boyhood days in the vineyards of Germany, but later adopted the Munson system, as practiced by the late Mr. Munson, of this section, a grape specialist of international repute.

Camping Out in the Ozarks

There are comfortable well equipped, moderate priced hotels, cottages and other accommodations in plenty in the Ozark towns along the Kansas City Southern Railway and the greater number of summer visitors avail themselves of their facilities for comfort and convenience. Neosho, Mo., Sulphur Springs and Siloam Springs, Ark., are the abiding places of many hundreds of summer visitors every year.

There are others, however, who prefer to spend their vacation by camping out, which is one of the most enjoyable, as well as most economical, ways of spending a vacation. Camping in a savage wilderness, remote from human habitations, is a formidable undertaking, but camping in the Ozarks, where it is usually a matter of a few minutes walk to obtain milk, eggs, butter, fresh fruits, and vegetables, and the village "general store" is almost within hailing distance is simple and easy.

The tent dweller sets up his habitation wherever the prospect pleases him most, usually where the fishing is good. If he disapproves of the cooking he must quarrel with himself, and he eats, sleeps, gets up

or lies abed in the morning, just as he pleases. A family—father, mother and the children—can have a lot of fun camping out, besides storing up a reserve supply of good health, that will last them until next season.

The tent and practically all the equipments can be rented so reasonably that it is throwing money away to buy an outfit that is to be used only a few weeks each year. Bed clothing, wearing apparel and cooking utensils the camper must supply for himself. Blankets and winter clothing that has seen better days are useful, as the Ozark nights are cool, and substantial clothing is needed to stand the wear and tear incident to outdoor activities.

Campers cut have plenty of fine places to go to. At Anderson, Noel, Lanagan and Elk Springs, Mo., and near Siloam Springs, Ark., are many places where the scenery is fine, springs of pure water at hand, fishing is good, boating and bathing safe and where supplies of all kinds can be had within a half hour's walk. Ideal locations for camping out parties affording fine scenery, good fishing, boating and bathing abound at these places.

The Field Crops

Of West Louisiana, East Texas and the Gulf Coast.

Contrary to expectations the newcomer in western Louisiana and eastern Texas will find, after a stay of a few days, that he is not invited to venture into untried fields of endeavor, to hazard his means on doubtful enterprises, or waste his energy in difficult pioneering work. While not farmed extensively at any time in the past, there have always been farms in cultivation and agricultural operations have been carried on for more than seventy years, and many of the existing farms have been tilled continuously. The new settler is not put to the necessity of learning the methods of cultivating strange crops or doing unprofitable experimental work. Nearly all the northern field crops are grown or can be grown profitably in this region and the soil is tilled in the same way—the only difference being that the southern growing seasons are longer and that the winters are milder. The new settler's past experience is as valuable to him in southern Louisiana and Texas as it is in Iowa, Illinois or Ohio. On the

farms he will find nearly all the crops cultivated in the northern states and several others peculiar to more southerly latitudes, like rice, cotton, sugar cane and several varieties of fruits not cultivated in the north.

The Corn Crop.

Because neither Louisiana nor Texas have, in former years, made offerings of corn in the northern markets, some people have naturally conceived the idea that corn cannot be successfully grown in these states. There is no basis for such an opinion, because the actual production shows otherwise. The quality produced, as a rule, is excellent and the yield varies from twenty-five to seventy-five bushels to the acre. On the rich bottom lands of the Sabine, Neches, Calcasieu rivers and their numerous tributaries and on the black loamy ridges traversing the prairie region from forty to eighty bushels per acre are con-



CORN FIELD, SHREVEPORT, LA., 127 BUSHELS PER ACRE.



OAT FIELD, LAKE CHARLES, LA.

sidered an ordinary yield. Where crop rotation, with a view to fertilization, is practiced on the uplands, in the forest area, similar results are obtained. There is a greater diversity of soils on which this crop is grown and also a difference in the yield on the different kinds of soils, but the maximum production per acre of the north is easily duplicated on most of the southern soils. Occasionally the crop has been produced twice on the same soil, the same year. The tendency in Louisiana and East Texas has been to produce sufficient corn for home consumption and to rely on other crops for ready money returns.

The greatly improved transportation facilities have put stock raising on a better financial basis, resulting in a large increase of farm animals and a greater corn and forage production. The corn production of Louisiana, for 1912, is given at 25,455,086 bushels, valued at \$15,035,489. For 1915 the crop is estimated to amount to 48,000,000 bushels or more.

Grain and Forage Crops.

Wheat for flour was grown more or less extensively in the earlier history of the country and there was a time when flour mills were not uncommon. Most of the flour mills disappeared at the close of the civil war. The milling processes in the northern states had been so perfected that it was found more expedient to buy the northern flour than to mill the home grown

wheat. During the past fifteen or twenty years many new mills were built in Arkansas, Central Texas, Oklahoma and Louisiana, some of which turn out flour while others manufacture corn products. During 1915 a hundred car loads or more of wheat were shipped to St. Louis from New Orleans, near which city the crop was grown. The greatest development in the milling industry is connected with the rice crop, and this has reached enormous dimensions.

Wheat, oats, barley, rye, etc., are grown extensively to obtain winter pasturage and grain in the sheaf and are produced at a time when the land would otherwise lie idle. Oats, sown in October, are pastured from December to March and harvested in May. The crop is mown while the grain is still in the dough. Though seldom threshed, an oat crop will yield from thirty-five to sixty-five bushels of grain to the acre. Sheaf oats will yield from two to three tons to the acre. Oats are also grown in rotation with cotton, corn and cow peas. Red rust-proof oats, vetch and red clover are often sown together and cured together. Two cuttings are usually made before letting the oats go to seed. In this way two crops of hay and one of matured grain are obtained; barley, wheat and rye are often grown in the same manner.

All the sorghums, both saccharine and non-saccharine, including the several varieties of broom corn, flourish from April until December or January. Of the sorghums, after the first cutting, a second, third, and sometimes a fourth crop comes

up from the suckers. The Early Amber and the Early Orange are preferred varieties for soiling. White and yellow milo-maize, Jerusalem corn, kaffir corn, etc., are grown more or less extensively and yield from ten to fifteen tons of fodder and considerable grain.

Every hay crop grown in the northern states has been produced near the Gulf Coast, but practical experience has demonstrated the folly of growing some of them, when legumes can be grown which act as fertilizers, yield double the quantity of hay and are worth per ton, in the nearest market, double the money. In the Gulf Coast prairie region the luxuriant growth of the native grasses makes excellent hay. In the forest area the native growth affords good pasturage about nine months in the year, and when the timber is removed this grass will make hay. Bermuda grass makes splendid pasturage, is a complete ration in itself and is good eight months in the year. On fertile soils it makes several tons of superior hay. Crab grass, Italian rye grass, teosinte, red top, rescue grass, etc., are used as hay grasses.

The cow pea, a forage plant and soil fertilizer, yields about twenty tons of green forage or two or three tons of dry hay per acre. One hundred pounds of cow pea hay are equal to 150 pounds of timothy hay, when corn is fed with them as a concentrate. The soy and velvet bean are grown extensively for hay and the Spanish peanut

yields about two tons of hay per year. These, like the cowpeas, are sown in the corn crop immediately preceding the last cultivation. Japan clover, a volunteer crop, makes from one to two tons of good hay and affords excellent pasturage until June, being cut in October. Red clover and crimson clover, grown by themselves or mixed with oats, afford about two good crops of hay, one in April or May and one in July.

Alfalfa and the various clovers, where cultivated, have done well. Their cultivation has not been extensive, but with the development of the stock raising industry a larger production of this class of forages will naturally follow. Some eight or ten thousand acres are grown near Shreveport, La. The Louisiana crop report for 1914 shows a production of 347,910 bushels of peanuts, valued at \$325,619; 1,907,094 bushels of oats, valued at \$1,036,121, and 328,004 tons of hay, valued at \$3,344,120.

The Cotton Crop.

Cotton, as a ready-money producing crop, is to Louisiana and Texas as corn is to the northwestern states. It is one of the best-paying field crops, which can be grown with little trouble and expense. One man can attend to the cultivation of sixty to one hundred acres, aside from the chopping out and picking. Cotton yields a revenue of \$20 to \$60 per acre and the cost of production is



HARVESTING ALFALFA, CADDO PARISH, LA.



COTTON FIELD NEAR SHREVEPORT, LA.

approximately as follows: Seed, 50 cents; planting and cultivating, \$3; picking, \$3; ginning, \$4; freight, commission, insurance, etc., \$3.75; total cost, \$14.25. The acre on which this expense account is given produced a bale of cotton. It was sold at the rate of 11 5-6 cents a pound, amounting to \$64.71. The seed was sold for \$16. The crop brought in a gross price of \$80.71. Minus the expense account, itemized above, the net profit was \$61.46. These figures are easy to duplicate in many localities on any of the river bottom lands, but the remarkable feature about this bale of cotton is that it was one of four crops produced and harvested from the same acre of ground within the space of twelve months. These four crops were sown and harvested as follows: Beans and beets planted October 1 and harvested February 1. Cotton planted May 1 and harvested September 1. Cow peas planted September 15 and gathered December 15. Potatoes planted January 1 and dug April 10. The land was then again planted in cotton.

A cotton crop from twenty acres, near Beaumont, on which commercial fertilizer costing \$2.50 per acre had been spread, yielded a little over twenty-eight bales. The total cost of production was \$641, or \$32.50 per acre. The gross income was \$1,547.80, or \$77.39 per acre. The net receipts amounted to \$44.89 per acre.

The yield, of course, varies with the kind of land used and cultivation the crop receives. On the gulf coast prairies, the river bottoms, etc., the yield runs from half a bale to one and one-quarter bales; in the timbered areas from one-third to three-fourths of a bale. Formerly cotton was the exclusive crop grown on many farms, but within the past decade the tendency has been to diversify crop production.

Rice Culture.

The actual cultivation of rice is identical with that of wheat, the only difference being that rice is irrigated and wheat, ordinarily, is not. Land, used for rice cultivation, must possess a subsoil sufficiently tenacious to hold water and be firm enough to sustain the machinery used in harvesting. The land must be susceptible to good drainage and the clay must be near enough to the surface to dry out in a few days after the water is drained off. It requires from twenty-four to thirty inches of water to supply the quantity absorbed by the soil, evaporation and used for irrigation during the growing period of rice; but the quantity actually needed is governed by the rainfall accruing during that time. The drainage of a rice farm is very important, as upon the prompt removal of the water depends the

plowing, the sowing and harvesting, and frequently the planting of other crops after harvesting.

One man can easily handle 100 acres of rice land and some handle 150 acres. The average cost of production and marketing per acre, if water rental is paid, is \$15.50 per acre. The average yield, ten barrels at \$3.25, is \$32.50; the average profits, \$17 per acre. The greater part of the crop is produced in Jefferson and Orange counties, Texas, and Calcasieu, Jeff Davis and Acadia parishes, Louisiana. In 1914 the total acreage in Texas was 235,866 acres and in Louisiana was 333,824 acres.

The yield of this crop occasionally runs as high as twenty-five barrels per acre and the price has been as high as \$5 per barrel. As with other grains, the yield per acre and the prices fluctuate more or less and the profits vary from year to year, though the net profit has always been much greater than could be obtained from a similar acreage in wheat or other grains.

In the earlier history of rice planting, the planter raised rice and nothing else. There was a period of several years in which the product of one acre of rice would readily pay for the product of several acres in other crops, like corn, oats or hay. The forage crops have since then become more valuable and more general crops are now grown on the rice farms.

Sugar Cane Cultivation.

American sugar cane cultivation had its origin in Louisiana in 1751, when it was introduced by the Jesuit fathers. The first commercial sugar crop was grown by Etienne De Bore in 1794 or 1795. All of the earlier sugar plantations were located on the alluvial lands convenient to New Orleans, but later the industry spread over Western Louisiana and thence to Texas.

Sugar cane is a gigantic grass, often reaching a height of ten to fifteen feet. It grows up straight, but at maturity will lean by reason of its weight or of wind pressure. Its roots are fibrous and lateral, stretching out in all directions, and do not penetrate the soil to any depth. The round stalk is divided by joints from three to ten inches apart, from which issue the leaves on alternate sides, and at the base of each leaf is a bud or eye from which the future cane is grown. In the planting of the cane the following method is usually pursued: After deep breaking, followed by pulverization, rows from five to seven feet wide are laid off and thrown up into high ridges. The crest of these are opened with a double mouldboard plow and into this opened furrow stalks of cane, one to three, are placed in continuous lines and carefully covered. From each bud on the cane planted comes a



RICE FIELD, BEAUMONT, TEX.



PLANTING SUGAR CANE NEAR BEAUMONT, TEX.

young shoot, growing rapidly into a continuous stand of crowded cane. The world's cane crop is produced by planting the entire or portions of the stalk, raising young plants from the eyes or buds on each joint. Cane replanted every three or four years produces an average of about nineteen tons per acre. The cane carries about 11 to 12 per cent of sugar, yielding, per ton, about 170 pounds. At the sugar houses \$3 per ton is the usual price paid, the average income being about \$60 per acre.

The area devoted to the cultivation of sugar cane in Louisiana is about 300,000 acres and the yield of sugar cane products in an ordinary year is about 360,300 tons of granulated sugar, valued at about \$28,822,000, and 23,727,735 gallons of syrup, valued at \$6,818,000, showing a total value of \$35,640,000. There are in operation 225 or more sugar houses, nearly all of which are located in the central and southern parts of the state. In Texas the sugar-making industry is confined to the lower Brazos valley, where some 20,000 or 30,000 acres are devoted to the cultivation of sugar cane and several large sugar houses are located.

Nearly every farmer in Louisiana, Southern Texas and Southern Arkansas grows sugar cane for manufacture into syrup, both for home use and for sale. This industry has assumed large proportions and it is estimated that over half a million barrels are annually produced outside of the sugar belt proper. Patches of sugar cane, from the fraction of an acre to ten, fifteen and twenty acres, are found on almost every

farm. The syrup is manufactured on a small scale with an inexpensive outfit, and a syrup, containing all the sugar in the cane, is produced which sells at 50 to 60 cents per gallon, the average production being 400 to 600 gallons per acre, yielding a revenue of \$200 to \$300 per acre. The farmer makes his cane syrup with the sugar in it and it is superior to any other syrup in the world.

Tobacco Culture.

Tobacco has been grown in Louisiana and Texas for longer than a century, the production being almost entirely for home use. The famous "Perique" tobacco, grown on the alluvial lands of St. James parish, Louisiana, has been a commercial crop for more than fifty years, the annual production being about 100,000 pounds. This tobacco owes its excellence to the peculiar manner in which it is cured and prepared for market, being practically cured in its own juice. During the past twenty years much systematic experimental work has been done in Texas and Louisiana on the part of the national government and by individuals to develop a standard trade quality of tobacco and to encourage its production in commercial quantity. The finer Cuban leaf and filler tobacco, grown from Cuban seed, and the Yellow Leaf tobacco and White Burleigh, which have been grown for some years, have yielded excellent results. In North Louisiana as much as 1,600 pounds



GRAPE FRUIT ORCHARD, BON AMI, LA.

per acre of yellow leaf has been produced, and in Nacogdoches county, Texas, 1,321 pounds. In South Louisiana and Texas (in Orange county), with cigar types of tobacco, the yield has reached over 2,000 pounds. Two crops a year can be obtained from the same planting. This is accomplished by leaving a sucker in the axil of the crown leaf when topping the plant. When the leaves of the first crop are gathered the old stalk is removed and the young sucker soon takes its place and, with a favorable season, makes nearly as large and fine a crop as the first one.

The Orchards of Western Louisiana.

The West Louisiana country is essentially one of diversified crops. Nature has so provided, but the tendency among men has been to specialize and hence we have an enormous rice acreage, great sugar plantations, large cotton plantations, large stock pastures, all of which have proven profitable. The man who wants a large farm can have everything to his liking for any kind of farming operations he may desire to engage in.

Fruits of one kind or another are found on nearly all of the older farms, but until within recent years very little fruit was grown for the market. Many varieties produce satisfactorily. Apples, particularly the late varieties, are of doubtful value and the same may be said of raspberries, gooseberries and a few other fruits.

Peaches grown commercially in Texas and Louisiana, on the upland soils, are among the finest and are also the earliest which reach the great markets in the north. Late blooming varieties seem to be more satisfactory than the earlier blooming varieties and apparently are more certain to yield fine crops. More crops per tree and more extra early crops can be made here than anywhere further north. The money value of an acre in peaches, like the Mamie Ross or Elberta, varies from \$100 to \$250 if intelligently handled and marketed. The trees begin to bear about the third year. In the fourth year and thereafter a commercial crop is expected.

Plums are indigenous to the country. If good shipping varieties are selected, they are profitable and should yield, to the grower, from \$100 to \$250 per acre. Several of the Japanese varieties, and hybrids of Japanese and native American plums have yielded splendid financial results. Several wild varieties are found in the forests near the streams.

Pears of all varieties are subject, more or less, to blight in Texas and Louisiana. They are, however, grown extensively, and are, in this climate, most prolific bearers. If properly sprayed, they are easily kept in good health and are profitable. They yield from 100 to 300 bushels to the acre, selling ordinarily for from fifty cents to one dollar per bushel.

Figs grow well on all sorts of soils and until within the last three or four years were grown solely for home consumption.

Most of the varieties heretofore grown were too tender to transport any distance. The fig has now become a commercial fruit in Texas and Louisiana, the magnolia fig being the preferred variety. They are usually planted in rows fifteen feet apart and twelve and one-half feet apart in the row. From three to five year old trees will generally average about 30 to 35 pounds of figs per tree per season, with two hundred or more trees to the acre. They begin to bear fruit the first year after planting, bear fairly well the second year, and about the third year yield a money revenue of \$100 to \$125 per acre, provided the orchard is convenient to a large city, where they usually find a ready sale. Most of the figs are now grown on five-year contracts with fig canneries, of which there are a number in Texas and Louisiana. The cost of an acre of figs is given as follows: Land, \$30; plowing, harrowing and discing, \$15; 193 trees at 12 cents, \$23.16; labor for planting, \$3.47; pruning, cultivating, \$20; total, \$91.53. This is on heavy gulf coast prairie sod, with a cannery convenient. At the present time fig canneries are operated at Bon Ami, La., and Beaumont, Tex.

Satsuma Oranges—The hardy Japanese Satsuma orange, budded on the citrus trifoliata stock, the only deciduous orange tree known, has proven itself capable of withstanding the ordinary winter frosts of Southern Louisiana and Texas. It sheds all its leaves in October and remains dormant until the middle of April, differing in this respect from the tropical varieties, which retain their foliage all the year around. The fruit of the Satsuma is a fine merchantable orange, maturing in October, and is the first in the market. In the vicinity of Beaumont, Tex., and Lake Charles, La., 150 orange trees are planted to the acre, the trees costing thirty cents each, and the cost of an acre, including land, trees and labor, will not exceed \$75. They generally bear the second or third year, and at five years usually bear from 800 to 1,000 oranges. A Satsuma orange orchard, five years old, is capable of yielding a money return of \$500 to \$1,500 per acre. A very severe freeze, a very unusual occurrence, may blight the limbs back to the trunk. When pruned back to the live wood, the trees throw out new sprouts and bear the succeeding year. The Louisiana sweet, the Dugat orange, yield well and the same may be said of the grape fruit or pomelo, the kumquat and the ponderosa lemon.

Grapes grow wild near all the streams fifty miles north of tide-water. Most of the domestic varieties common to the United States do well. Produced in moderate quantity they are generally profitable.

Strawberries have proven highly profitable where systematically cultivated. As this crop comes in extra early and when nearly all other fruits, except apples and oranges, are gone, very good prices are paid for it. The berries are shipped northward frequently in January, February and March, and yield about \$150 per acre, though incomes of \$250 to \$400 are obtained every year. Blackberries grow wild in all parts of East Texas and Western Louisiana and along the streams the wild dewberry is a common plant. The cultivated varieties of both families do splendidly on all sorts of soils and are generally very profitable. The net profit usually runs between \$100 and \$300 per acre.

Pecans, English Walnuts, etc.—There are few streams in Texas and Louisiana along which a more or less abundant growth of indigenous pecan, hickory or walnut trees is not found. Among the pecans are several



LAKE CHARLES ORANGES

ORANGES, LAKE CHARLES, LA.

varieties, which, by reason of the thinness of their shells, the large and splendidly flavored kernel, are esteemed above all others. The finest of these have been developed by budding and grafting into an orchard tree, and during the last fifteen or twenty years they have been systematically cultivated and several large orchards have been planted in Louisiana. Pecan trees adapt themselves to and thrive on a wide range of soil. Planted on upland the budded trees begin to bear about the fifth year; on the heavy bottom soils about the seventh or eighth year. They are generally planted from thirty to fifty feet apart, according to the kind of land used. At forty feet apart 27 pecan trees are planted to the acre, which, when bearing, yield an income of \$6 per tree or \$162 per acre. The wild varieties bring from three to six cents a pound, while the cultivated improved varieties bring, at wholesale, from twenty to fifty cents per pound. Budded or grafted trees, one to two years old, are generally sold by the nurseries for \$50 to \$100 per hundred trees, and sometimes at higher figures. The black walnut is more valuable for its timber than for its nuts. Its abundance, however, shows that the English and Japanese varieties can be successfully grown for their valuable nuts. The best known varieties of cultivated walnuts are the Rush, Franquette and Santa Rosa. The chestnut family is represented in the chinquapin and the filbert in the wild hazel, showing that these excellent nuts can also be grown. The almond is a member of the peach family and will grow wherever the peach does. Only the pecan has been planted in commercial orchards, but Japanese chestnuts and other cultivated nut trees are found on many farms. Several varieties of Japanese persimmons have been planted extensively within the past ten or fifteen years and now appear in the northern markets.

The Commercial Truck Garden of the Gulf Coast.

The Kansas City Southern Railway is a north and south line splendidly equipped for handling perishable goods. It hauls vegetables, fruit and poultry twelve months in the year, reaching as far eastward as Buffalo, N. Y., as far north as Canada, and as far west as Denver, and beyond. The northern markets consume enormous quantities of fruits and truck grown in Louisiana and Texas, and from fifteen to twenty thousand carloads are transported annually by the various railways reaching this territory.

The essential condition, in the successful management of a commercial truck farm, is the proper provision for the marketing of the crop. It is important to produce either truck or fruits in commercial quantity, and to that end, the grower must produce the quantity, by himself or in combination with other truck growers, that is to say, co-operating with a fruit and truck growers association.

In this section of the country a truck farm should be operated every month in the year and the soil should be kept busy continuously. The grower should plant something and have something to sell every month in the year. In January transplant onions, shallots and cabbage; there should be ready to sell, strawberries, cauliflower, cabbages, beets, radishes, spinach, peas and some potatoes; in February plant beets, mustard, leek, peas, beans, potatoes and early corn; strawberries, cauliflower, cabbages, beets, radishes, spinach, peas and some potatoes should be marketed; in March, plant beans, squashes, melons, okra, potatoes, corn, sorghum and millet, marketing the same crops as in February; in April all tender vegetables may be sown and plants from the hotbeds, tomatoes and peppers, be set out, also plant sweet potatoes, millet, corn, beans and okra; the sales from the farm will be the same as in March; in May most of the vegetables will have been sown, but where potatoes, onions and other crops have been taken off, corn, melons, cucumbers, squashes, pumpkins, etc., may be planted, also some varieties of cabbage, late Italian cauliflower, sweet potatoes, cowpeas, sorghum and black-eyed peas; the sales will be the same as in April, with cucumbers, potatoes and Cape Jessamine buds added; in June plant and sow the same as in May; the sales will be as in May, with cantaloupes added; in July plant bush and pole beans, corn, sweet potatoes, millet, broom corn, cow peas; plant cabbage and cauliflower seeds in cold frames and for the fall garden sow cow peas; the sales will consist of figs, hay and many of the crops above mentioned; in August, plant carrots, celery, potatoes, millet and peas; the sales will be the same as in July; in September plant early peas, beans, parsnips, salsify, onions, kale and spinach; set out cabbage, etc.; the sales will be the same as in August, with beans added; in October plant onions, marrowfat peas, cow peas, salsify and oats. Strawberry plants should be set out this month, but planting can be continued until April. The October sales will consist of figs, hay, oranges, beans, turnips, radishes,



IRISH POTATOES, LUDINGTON, LA.

etc. In November plant cabbage, spinach, onions or oats, clover, alfalfa, lettuce, turnips and radishes; the sales will be the same as in October, with strawberries added. In December plant peas, carrots, cabbage, radishes and parsley and, late in the month, potatoes; all kinds of vegetables will be marketed in December.

The money yield per acre, as obtained from the average fruit and truck farm in Texas, one year with another, is as follows:

Irish potatoes, first crop, \$80 to \$250; second crop, \$100 to \$150; March potatoes, \$3.50 per bushel; April potatoes, \$2 per bushel; May potatoes, \$1.25 to \$1.50 per bushel; sweet potatoes, \$50 to \$150; onions, \$100 to \$400; Texas Bermuda onions, \$200 to \$400; cabbage, \$100 to \$300, two crops; cauliflower, \$300 to \$1,000; tomatoes, \$100 to \$300; asparagus, \$250 to \$450; snap beans and table peas, \$100 to \$300, twice and three times a year; strawberries, \$150 to \$400;

blackberries, \$100 to \$300; dewberries, \$150 to \$250; peaches, \$75 to \$250, varying with age of orchard and date of ripening; grapes, \$100 to \$250; plums, \$100 to \$250; pears, \$75 to \$150; figs, \$100 to \$250; water-melons, \$50 to \$150; cantaloupes, \$50 to \$150; lettuce, \$75 to \$150; radishes, \$150 to \$400; peppers, chili, bullnose and tobacco, \$100 to \$300; celery, \$300 to \$500; pecans, \$200 to \$400; English walnuts, \$200 to \$400; Satsuma oranges, \$200 to \$1,000; Cuban leaf wrapper tobacco, \$85 to \$400; ribbon cane, open kettle syrup, \$100 to \$200; peanuts, \$50 to \$75, with one or two tons of hay worth from \$10 to \$15; Cape Jessamine buds, \$200 to \$250, etc., etc.

With proper care it is not difficult to raise any of these crops; the location of the truck farm with a view to shipping facilities and the co-operation of other truck and fruit growers is the essential consideration in this branch of agriculture.

Stock Raising

On the coastal prairies cattle raising, as a business, has been carried on since the arrival of the first settlers. In the woodlands stock raising has always been part of the ordinary farming operations. More re-

cently stock farming has become established on the prairie farms and the breeds of live stock have been greatly improved. As a matter of fact, the production of live stock of all descriptions has been greatly in-

creased in the country traversed by the Kansas City Southern Railway. The enormous increase in forage and corn production was made necessary by the increased interest in stock raising and the improvement of the various kinds of live stock now raised on the farm.

Poland China, the Berkshire, Red Jersey, Duroc and Essex breeds of hogs can now be found on many farms and there are a number of breeders in Southern Texas and Louisiana with herds as good as any found elsewhere.

Thousands of cattle are now annually fed at the cottonseed mills and shipped to the northern and western markets. Cottonseed meal and hulls, rice bran, polish and shorts, cheap molasses from the sugar houses and other forage provide superior feeding rations. Improved breeds of the dairy type—Herefords, Durhams, Jerseys, Polled Angus and Devons—are rapidly replacing the older breeds.

Pure-bred northern cattle and also other improved stock for breeding purposes have been introduced all over the south, Texas and Louisiana included. It has also been demonstrated by practical feeding tests that northern bred cattle can be taken to Louisiana, fed there systematically and be made to top the Chicago market. One carload sent there was sold for 40 cents more per hundred than any other carload sold there that day, and within 10 cents of the highest price paid for any cattle during the preceding week. This test shipment demon-

strated that Southern Texas and Louisiana can enter the market any day with well bred beef cattle and become a strong competitor with the north in beef production.

A large majority of the horses have been raised at home. Mules have been raised in sufficient number to demonstrate that with proper care and attention the finest and largest can be raised here. The flocks of sheep have been improved and wool in considerable quantity is now annually shipped from De Ridder and Leesville in Louisiana.

The engrossing pursuits of the first settlers in Southwestern Louisiana and Southeastern Texas were farming and stock raising. The farming operations were confined to localities where navigable water courses or passable roads made it practicable to transport the product of the farm to market. Before the advent of railway transportation cotton of necessity was the only crop which could be relied on to furnish an immediate cash income. It is a commodity which can be stored an indefinite length of time, can withstand rough handling, is not easily damaged by heat, cold or rains and commands spot cash when offered for sale. The cotton bale was the medium through which communication with the outside world was maintained and which provided the comforts as well as the necessary commodities not produced on the farm or plantation.

Cotton, in the olden days, was always a friend in need, and some cotton is grown with other crops on farms where it was formerly the exclusive crop.

The Topography of West Louisiana

Beginning a short distance south and west of Shreveport and extending southward to within about forty miles of the Gulf Coast is a ridge, backbone or watershed, lying between the Sabine river, on the west, and Red river and Calcasieu river on the east. This ridge has a width varying from twenty to fifty miles and runs through Caddo, De Soto, Sabine, Vernon and Beauregard parishes. Spurs from this ridge run into Rapides, Allen and Jefferson Davis parishes, forming the water sheds of the numerous tributaries of the Calcasieu river. The southern terminus of this ridge is in the yellow pine flat lands in Calcasieu and

Beauregard parishes. The altitudes above sea level along this ridge at several railroad stations are as follows: Shreveport 210 feet, Mansfield 331 feet, Trenton 348 feet, Loring 282 feet, Fisher 337 feet, Hornbeck 313 feet, Leesville 238 feet, De Ridder 206 feet, De Quincy 85 feet, Lake Charles 19 feet, Beaumont, Tex., 24 feet, Nederland, Tex., 25 feet, and Port Arthur, Tex., 8 feet.

The natural drainage from the ridge flows westward into the Sabine and easterly and southerly into Red river and the tributaries of Calcasieu river. It is a country which lies high, is airy, free from stagnant waters, has excellent natural drainage and a diversity of fertile soils.



LONG LEAF PINE FOREST ROAD NEAR LAKE CHARLES.

Along the numerous water courses are rich alluvial lands, usually covered with hardwood timbers, consisting of white oak, red oak and other oaks, ash, hickory, beech, gum, sycamore and close to the streams sometimes cypress. Lying between the water courses are the uplands, usually dark loamy soils underlaid by a red clay, more or less porous subsoil. In Caddo, De Soto and Sabine parishes the natural timber growth, where still standing, is short leaf pine and hardwood of many kinds, oak and hickory predominating. In Vernon, Beauregard and Calcasieu parishes and parts of Rapides and Allen parishes almost all of the upland was originally covered with a magnificent growth of long leaf yellow pine. Along the water courses is a narrow fringe of hardwood timber of several varieties. The south two-thirds of Calcasieu parish, all of Jefferson Davis parish and the east half of Allen parish are open prairie lands. Convenient to the Kansas City Southern Railway through Orange and Jefferson counties to Beaumont, Tex., along the Sa-

bine river, there is much fine hardwood and yellow pine timber. From Beaumont, Tex., and Lake Charles, La., south are open prairies. From tidewater inland for a distance of ten to twenty miles in Louisiana is a belt of salt marsh, which in many places is being reclaimed.

The annual rainfall varies from forty-five to fifty inches and the distribution is especially favorable for crop production throughout a long growing season. The average distribution is as follows: January, 4.31 inches; February, 3.51 inches; March, 3.98; April, 4.62; May, 5.84; June, 4.25; July, 2.59; August, 2.68; September, 3.25; October, 3.62; November, 4.45; December, 3.81. Total for a year, 46.91 inches. No region in the United States is so well provided with excellent water for household uses and live stock as is Western Louisiana. It has thousands of springs of pure soft water and hundreds of small clear creeks. In wells most excellent water is found at depths varying from twenty-five to forty feet.

Mansfield and South Mansfield, Louisiana

Mansfield is one of the oldest towns in Louisiana. It was an important commercial point many years before the outbreak of the Civil War. Sixty to seventy years ago it was surrounded by numerous large plantations and was a great social and financial center. During the Civil War it was the bone of contention between the Union and Confederate forces, and within a few miles of it a decisive battle was fought. At the close of the war the country was financially exhausted and the economic conditions had so changed that many years passed before town and country recovered. Most of the old plantations had been abandoned and grew up in second growth timber. What land was under cultivation was mostly in the hands of shiftless tenants. The building of the Texas & Pacific Railway, about 1878 or '79, stimulated local development to some extent, and the construction of the Kansas City Southern helped it considerably, but no really active growth took place until about 1910, when the town began to wake up and keep awake.

The population of the two Mansfields is now about 6,705, more than double of what it had been. From a strictly rural town it has developed into a manufacturing town of considerable importance.

The old Mansfield is the judicial seat of De Soto Parish, and is 380 feet above sea level. It has two strong banks—the People's Bank and the Bank of Commerce—with combined resources of \$1,100,000. There are two good newspapers, the Enterprise and the Journal, both published weekly. The Methodist Female College has been an institution in Mansfield for longer than half a century, and the city also has a business college. Most of the business structures are fire-proof brick buildings, some forty or fifty of them, and the residence part has many handsome dwellings. The city has electric lights, artesian water, natural gas, modern sanitary fire-proof schools, churches of the leading denominations, a system of water works, paved streets and some twenty or thirty miles of paved sidewalks.

South Mansfield, though under a separate municipal government, is really a new part of the old town. When organized, some six years ago, there was a strip of vacant land between the two municipalities, but

this vacant tract has since then been built up with residences, making the two towns look like one town, with the dwellings in the center, the mercantile establishments near the north end and the manufactures at the south end.

In South Mansfield are: The Mansfield Light & Ice Co., the Rosemary Pine Lumber Mills, the Frost-Johnson Lumber Co. saw-mill and planer, the Mansfield Hardwood Co. mill, a shuttle mill, a large cotton gin, Barber Iron Works and Machine Foundry, a large cottonseed oil mill, a weekly newspaper, the "Star," three or four hotels, a union church, a bottling plant and from twelve to fifteen business firms.

The development of oil and gas in the immediate vicinity greatly quickened the growth of both Mansfields. Numerous borings for oil were made and on May 1, 1914, more than thirty oil wells were producing an aggregate of between 30,000 and 40,000 barrels of oil per day. The largest number of producing wells is at Naborton, about eight miles from South Mansfield. A short line of railroad has been built to Naborton, which has grown into a prosperous business town. A pipe line to carry crude oil to South Mansfield, where a gasoline manufacturing plant is to be installed, is under construction. New wells are being constantly bored, the latest venture—June 15, 1916—being a producing well of 2,000 barrels of oil per day.

De Soto Parish has one hundred miles of good roads and recently voted a tax for additional road construction. The two Mansfields want more factories. They have for fuel crude oil, gas and unlimited quantities of brown coal or lignite which can be mined at very low cost. There are various kinds of clays and shales for the manufacture of pottery, bricks, sewer pipe, wall copings and other clay products. Good sands for glass making abound in great quantities. Cotton is produced in large quantity, 15,000 to 25,000 bales, and a cotton mill could find a good location here.

There is fine fertile land in the adjacent country and any kind of a crop can be successfully grown. As a live stock country this section of Louisiana is unexcelled. Any of the banks in Mansfield, La., will be pleased to supply further information.

Summer Outings in the Ozark Mountain Region

The season of brazen skies and sultry nights, flies and mosquitoes is not far off; neither is that feeling of restiveness which afflicts the denizens of the city about this time of the year. It is the annual awakening of the migratory instinct, the heritage of man from countless generations of ancestors, who lived in the open. The great city is the product of several thousand years of civilization, but through the roar of traffic, the voices of the ancestors are heard in the purling music of the brooks and the rustling of the leaves in the forest and their posterity understand the call. What a blessing it is, to be able for a time, even for a day, to cast aside the cares of business, the drudgery of household work, the glaring refraction of the sun from the dusty streets of the cities and go where the breeze rustles through the leaves, where it is cool under the trees and where one can rest.

Convenient to the cities in half a dozen states and particularly to Kansas City, St. Louis, Memphis, New Orleans, etc., is the great Ozark plateau, or mountain region, a vast triangle of elevated land extending from the Mississippi and Missouri rivers, southwesterly to Red river, in the southeast corner of Oklahoma. The Arkansas river divides it into two parts, the greater part being north of this river. The Kansas City Southern Railway skirts the western edge of this plateau, while the St. Louis, Iron Mountain & Southern Railway traverses its eastern escarpment.

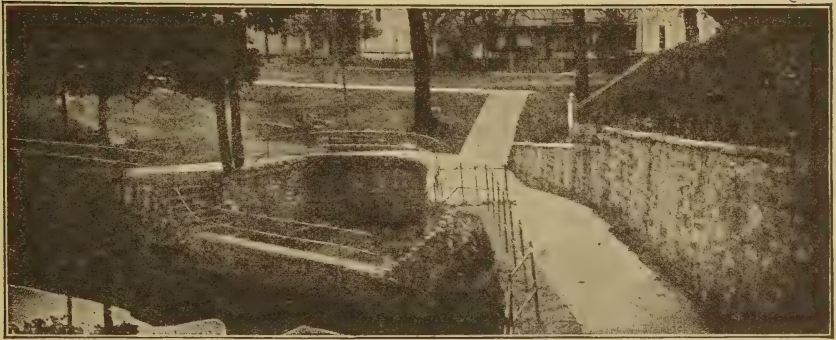
The altitudes vary from 1,000 feet to 2,500 feet, the greater altitudes being in southwestern Arkansas. The whole area is a vast table land, which, in the course of ages has, by the erosion of hundreds of rivers and water courses, been cut into mountains and valleys, hills and gentle slopes and high, comparatively level areas. The greater part of the plateau is of sedimentary origin and underlaid with strata of limestone, but in the southwest corner of Arkansas, notably in Polk, Sevier, Howard and Pike counties are indications of intense

volcanic activity, and in this section are mineral deposits which in time will be mined.

The country in general is hilly, and in places even mountainous, but the elevations are not so great as to exclude from view comparatively large scopes of country. Unlike the Rocky Mountain country, the landscape is not hemmed in by continuous ranges of high verdureless mountains, but rather presents a panorama of exquisite scenery as the journey proceeds. Very few people, even



BEFORE SUNRISE AT NOEL, MO.



TWIN SPRINGS, SILOAM SPRINGS, ARK.

those resident in the towns of the Ozark region, have any conception of the natural beauty of the landscape, the numerous varied and highly interesting features likely to be encountered while leisurely driving or riding along the roads leading from and connecting the various towns. In the Ozark landscape there is always something beyond the immediate range of vision that is more beautiful than the piece of road already traversed. During the summer months there is always visible in the distance the deep green of a timbered hill crest, suggesting many scenic possibilities beyond.

Nature was lavish in the Ozarks, creating a vast table land broken by erosion into hundreds of ridges, covered with forest and

traversed by a thousand rivulets, brooks and rivers, formed by countless springs issuing from the hillsides. From April to October the landscape is bedecked with flowers. The damp and shady places are full of violets, spring beauties and ferns, and the hillsides and valleys are resplendent with the dogwood, haw, wild plum and crab blossoms and hundreds of orchards and berry patches contribute their share to the beauty of the landscape. In midsummer every shady nook is full of ferns and on the spring branches and clear pools are mosses, water cresses and lilies. The forest patches are now at their best and in the orchards a bounteous harvest is in sight. It is the season when Bob White, Cock Robin and the impudent Bluejay are



BOATING ON THE LAKE, SULPHUR SPRINGS, ARK.

getting the best there is in life; when the big bull frog in the pool and the little fellows of his ilk are vociferous and the hungry bass mistakes a wad of feathers for a new kind of a bug or a revolving spoon for a live minnow. The woods are full of music and even the most sordid soul can be awakened by the cackling of the hen or the crowing of the barnyard cock.

In September and October, while the golden rod and the sunflowers are struggling for possession of the roadside and the cornfields are maturing, the hillsides and valleys are aflame with color as the forest foliage turns carmine and yellow and the maples and oaks stand forth in their glory and everywhere in evidence are the hundreds of orchards with the trees loaded down with big red apples.

A day in the Ozarks in May or June, along some clear, swiftly running mountain stream, rushing over the clean gravel, is delightful. At the beginning of day, nature illuminates her work with a brilliant mountain sunrise announced by the twitter-

ing of the birds in the branches. As the hours pass, the lights and shadows play among the trees and on the rippling waters, bringing out in detail the delicate tracery of the curtains of vines and creepers, running from tree to tree, and later in the day, when the birds have ceased to sing, there is the sunset, with its play of colors in carmine, violet, purple, mauve, gold and silver, and later still, on the banks of the river, the song of the frogs, the deep black shadows of the overhanging trees, the streak of burnished silver, the reflex of a golden cloud—beyond, the splash of a bass in pursuit of a careless moth—then inky blackness, and over the distant hills the halo of a rising moon.

Along the western border of the Ozark Region are many places, convenient to the business towns and cities, which are most attractive locations for summer vacations and outings. The hotels of the Ozarks region, while generally small, are, as a rule, good and their prices are moderate. Private accommodations can be had in most of the



INDIAN CREEK, ANDERSON, MO.



A BIT OF OZARK FOREST.

towns. The inhabitants of the Ozark towns are a quiet, respectable class of people, engaged more or less earnestly in fruit growing, poultry raising, the raising of fine live stock and such mercantile and industrial activities as are common to the smaller

towns. Nearly all the towns are situated from 1,000 to 1,600 feet above sea level, where there is pure country air, a moderately cool summer climate, an abundance of fresh eggs, good rich milk and butter, fine fruits and berries, the softest, purest free-stone water and the enjoyment of an outdoor life at a very moderate cost. It is an ideal section of country to which one can take his wife and babies and give them an opportunity to enjoy life, to rest and recuperate. There are nearly a dozen places on the line of the Kansas City Southern Railway where this can be done and, in general, it will not cost much more to stop for a month than it does to stay at home.

The towns best equipped to entertain summer visitors are Neosho, in Newton County, Mo., Anderson, Elk Springs and Noel in McDonald County, Mo.; Sulphur Springs, Gentry, Siloam Springs, Rogers, Monte Ne in Benton County, Ark.; Eureka Springs in Carroll County, Ark.; Mena, Bog Springs in Polk County, and Baker Springs in Howard County, Ark. The passenger department of the Kansas City Southern Railway will be pleased at all times to furnish any desired information concerning rates and accommodations, etc. This information may be obtained by addressing Mr. S. G. Warner, General Passenger Agent, Kansas City, Mo.



ALONG MOUNTAIN FORK RIVER, NEAR MENA, ARK.

The Ozark Mountain Region of Missouri and Arkansas.

The Ozark mountain region is a vast plateau, covering a large part of Missouri, south of the Missouri River, extending south within one hundred miles of Red river, being divided into two parts by the Arkansas river. This plateau is traversed by many fairly large rivers and several hundred beautiful mountain streams, tributaries of the Missouri, Mississippi, Arkansas and Red rivers. In some localities are evidences of distinct volcanic disturbances, but in general the Ozark Uplift or plateau is a great table land cut into smaller comparatively level areas, into hills in places and magnificent fertile valleys in others. Its altitude insures its healthfulness and its natural water supply is the finest on the American continent. Its general trend is from northeast to southwest, having its greatest width near the Missouri and Arkansas state line, tapering off southwesterly into Oklahoma and northerly to the Missouri River, several spurs running easterly to the Mississippi River. The altitudes range from 1,000 to 1,500 feet except in southwestern Arkansas where altitudes of 2,000 to 2,500 feet are reached. Along its western slope in southern Missouri and western Arkansas it is traversed by the Kansas City Southern Railway and is crossed in all directions by other railways. The St. Louis, Iron Mountain and Southern Railway runs along the eastern edge of this plateau.

Almost the entire area, except where cleared for cultivation, is wooded and there is considerable diversity in the soils. It is well adapted to general farming operations and the profitable raising of live stock, but much of the more elevated land is admirably suited to the commercial production of fine fruits, berries, truck and cannery stock. The apple, in southwestern Missouri and northwestern Arkansas, has reached the perfection demanded in the fruit markets of the world. It has here reached the standard of quality demanded and is produced in commercial quantity, yielding annually a revenue of four to five million dollars. Enormous quantities of strawberries are produced in the same locality and also yield a large revenue. The peach is abundantly produced in this northern section of the Ozark region, but is not as re-

liable in the yield as the apple, though some peaches in commercial quantity are produced every year.

In the southern section of this Ozark plateau is another fruit belt, in which the peach is the predominating tree fruit, though excellent apples are produced in Scott, Polk and the northern part of Sevier counties, which have the greatest altitudes, 1,200 to 2,200 feet. The winter apples do the best in the highest elevations, but several varieties of the summer and early fall apples yield good fruit and form a source of considerable revenue. The peach acreage is between ten and fifteen thousand acres and the yield more reliable than in any other part of Arkansas. Strawberries, blackberries and other small fruits are abundantly produced and reach the northern markets very early in the season.

Most of the country roads in the Ozark region are naturally good, and it is practicable to go almost anywhere, even in bad weather. While good in most places for ordinary traffic, in places they lack the perfection required for automobile travel. It was readily recognized that a country so rich in health and pleasure resorts, in scenic attractions and local traffic is at a disadvantage if it has not the best roads that human ingenuity could construct. It was plain enough that the various health and pleasure resorts should be connected by good roads; that the fruit, berry and poultry raiser should be enabled to market his products more easily, and, if the roads were good throughout, long automobile tours could be made from the great cities with comfort. A movement was begun during 1915 in Benton and Washington counties in northwestern Arkansas to begin construction of a great smooth turnpike ninety miles in length, to connect the towns of Monte Ne, Rogers, Bentonville, Centerton, Hiwassee, Southwest City, Grove, Gravette and Sulphur Springs, by straightening, widening and shortening the existing roads, building bridges and culverts, etc., and doing whatever is necessary to secure a first-class road. The general interest awakened has gone far beyond the original conception. Since then Joplin, Neosho and Kansas City have become interested, and all the counties between Joplin, Mo., and Shreveport, La.,

have raised money for a continuous turnpike between these cities. The Oklahoma counties along the Kansas City Southern Railway have likewise joined the movement, which will eventually result in the construction of a broad, smooth turnpike extending from Kansas City to Shreveport with numerous equally good branch roads leading to all points worth visiting. Most of the county road funds are available for this work, and large sums are being raised by private subscription. The Kansas City-Joplin part of the road is practically assured, and from Joplin to Siloam Springs, 70 miles, a splendid road has been built. Funds have been provided for construction to Shreveport. The Oklahoma system will connect with the Arkansas roads. All towns along the proposed highway are raising money for construction, improvement and bridge building. In two or three years an elaborate road system will have been completed.

The entire Ozark region is particularly well favored in the matter of marketing its products. The industrial population within easy reach, all consumers and not producers of farm products, is very large, and a splendid home market is assured. On its northwestern edge is an enormous coal field, with Pittsburg, Kan., as the commercial center, from which about 75,000 people are supplied. Joplin, Mo., is a great manufacturing center, and is the banking point for a lead and

zinc mining industry, the output of which is valued annually at from fourteen to sixteen million dollars, and in which over 100,000 people are interested. Fort Smith is also an important manufacturing point, and is the commercial center for another great coal field. Texarkana and Shreveport have great woodworking plants, numerous factories of all kinds, and handle great quantities of cotton. Woodworking plants are found at most stations on the line, and for its length there is greater industrial activity along the Kansas City Southern Railway than on any other railway in the United States.

Beyond the home demands for farm produce is that of the larger cities like Kansas City and St. Louis, Mo.; Houston, Dallas and Fort Worth, Tex.; Memphis, Tenn., and New Orleans, La., any of which can be reached within twenty-four to thirty hours, and all of which afford a splendid market for fruits, vegetables, poultry, eggs, etc.

The counties of Newton and McDonald, in Missouri, and Benton and Washington counties, in Arkansas, lie on the northwestern slope of the Ozark plateau; south of the Arkansas river, on the southwestern slope, are the counties of Scott, Polk and Sevier and along the western slope, the counties of Adair, Sequoyah, Le Flore and McCurtain, in Oklahoma, all except the last named being traversed by the Kansas City Southern Railway.

Home Life in the Ozark Region

"Half of the world does not know how the other half lives," and perhaps it would not make much difference if it did, because, in the main, the home life of the people is governed by its environments. Owing to fixed habits of thought, or inability to think, the environment appears to be the essential feature in the development of the individual. Mental inertia makes it difficult to adapt one's self to new conditions, and it requires a strong will to make a radical change, to remove one's self from one environment into another. The average resident of the city fits into his environment as does the peg to the hole bored for it. He cannot easily realize that he could fit in anywhere else. To the ordinary wage-earner, the ringing of the alarm clock be-

fore daylight, the breakfast bolted in haste, the long ride on a dingy street car, the eight, ten or twelve hours work in an office, factory or store, the rush for a mid-day lunch, the evening ride with the mob for home, the dodging of street cars, automobiles and vehicles, are a matter of course. Between his sleeping place and his working place are miles of streets, lined with tall buildings, which cut off the breeze and retain the heat; thousands of pedestrians of whom he may not know one in a thousand. Though he has lived in the city nearly all his life, he is virtually a stranger among strangers, and could not name the people living in the same block. Of course, he has some diversions; he can read of a murder or two in his paper, see someone

run over by an automobile, see a house afire, read the baseball bulletins, or about a millionaire's donation to a new college; or if he is not working overtime, occasionally go to the theater; or if he wants to commune with nature, go with the family to the city park, where several thousand others are likewise communing, and then fight for room on the street car on his return home. Another pleasant diversion is to figure up the grocery bill, the meat bill, the gas bill, the rent bill, laundry bill, and guess for how much he has been done by the enterprising merchant on the next street corner, and wonder if anything will be left at the end of the month, and dreading also the possibilities should he fail to get on the pay roll for a few months. Eggs with a distinct graveyard flavor, meat too tough to eat, stale vegetables, overripe fruit, butter strong enough to walk by itself, milk guaranteed to murder an infant in forty-eight hours, lard and syrups of doubtful parentage, and coffee and sugar which are always shy several ounces to the pound, are no novelties to the resident in the city. He takes all this as a matter of course, and anything different would not look natural to him.

The man in the Ozark region lives somewhat differently and seems to get considerable solid comfort from his way of living. Mentally he is alert and physically he is more sound than the city man. His environment is different from that of the city. Let us take a drive with him. We can leave the train almost anywhere, but say we drop off at any one of the fruit-shipping stations. The country is hilly and even mountainous in places, but the elevations are not so stupendous as to exclude from view comparatively large scopes of country. But not all of the country is hill and valley. There are many areas of level and undulating land, traversed by numerous small, clear, swiftly flowing streams, and of scenic surprises there is an abundance. The Ozark region has a beauty peculiar to itself, the scenery changing constantly as the journey progresses and the deep green of a timbered hill crest in the distance suggests scenic possibilities beyond. Its ample rainfall gives it a luxuriant vegetation and where the land is not occupied by farms, orchards and berry patches, and nature is left to her own resources, there is a riot of wild flowers, blooming shrubs and vine covered trees. Every water course and spring is decorated with a profusion of ferns, mosses, wildflowers, Virginia creepers, trumpet

flower vines, etc., and this profusion of flowers is not laid out in geometrical figures or surmounted with a sign board "keep off the grass," but is as good as Mother Nature made it.

The good, hard gravel road leads us through an enchanting country. Every few hundred yards we cross a spring branch or a brook rushing over a clean gravelly bed. Springs gush out of the hillsides everywhere and large streams with great deep pools full of bass, crappie and other game fish are not far away. Coveys of quail are started up a dozen times along the road, which generally is well shaded. Within three or four miles of town the farms are from ten to forty acres in extent and lie close together, the neighbors being within call of each other. Apple and peach orchards, berry patches, potato fields and vegetable gardens are much in evidence, and the washday linen can be readily seen by looking from one farm to another. The farms seem well populated, and besides the humans there are plenty of chickens, ducks, geese, turkeys and young pigs. The White Leghorns and Guinea hens seem to prefer the country road to green pastures, and make much ado when forced to get out of the way of the vehicle, and the ducks at the crossing of the next brook also have a lot of uncomplimentary remarks to make.

A few miles farther out the farms become larger. Fine cattle, horses and mules are feeding on the pastures, and near the barns are droves of Poland China, Duroc and Jersey Red hogs. Alfalfa patches are seen here and there, and great fields of corn, wheat, oats, millet, sorghum, together with small orchards for home use, are now the prevailing feature of the landscape. A turn into a crossroad brings us back among the fruit growers, and a flock of youngsters just coming out of a neat schoolhouse reminds us that it is getting near dinner time.

We had traveled leisurely, and had been cordially greeted by every man we met on the road and on the farms. Several invitations to dinner were declined, but on the return we accepted one from the owner of a twenty-acre farm. Both appetite and dinner were good, and the after-dinner conversation naturally turned to the farm and its prospects, and said the owner thereof, who had not always been a farmer:

"Here on my little farm I am it; no man tells me to come or to go, or has the right to find fault with my coming and going, and if one should have the temerity so to do, I

can look him in the eye and tell him to go to. I can hold my job indefinitely. There will always be enough to eat and a place to sleep for me and my family. Some years I may not seriously increase my bank account, but as we pay out no cash for chickens, eggs, milk, butter, fruits, vegetables or fuel, there will always be enough to sell of one kind of produce or another to pay the taxes, buy clothes and other things and take a trip somewhere when the year's work is practically over. We buy but little of food in town, except flour, coffee, sugar, etc., and of non-perishable goods we buy enough at a time for cash to make the price a consideration. In our cellar and pantry we have four or five barrels of apples, half a dozen big crocks of apple butter, a keg of cider vinegar, several hundred jars of preserved fruits, jellies and marmalades, cabbages, carrots, potatoes, turnips, onions, pumpkins, squashes and bacon, pickled pork and hams enough to last us far into spring, and we always have available young chickens, eggs, milk, cream and butter. Fresh beef or mutton we can nearly always get by exchange. Ready money is good to have in the bank, but little of it is needed for every-day expenses on the farm. Something can be produced and sold every month in the year. The specialist or exclusive grower of truck or fruit, or the exclusive poultry man, cannot do it, but a first-class, all around farmer, who will grow grain and forage crops, raise hogs, sheep, cattle, horses and mules, grow vegetables and truck for the canneries, operate a dairy with good dairy stock, operate a poultry yard in an up-to-date way, have a good-sized strawberry patch, and an apple and peach orchard in good condition, can do it. There are very few who possess all the virtues above alluded to, but this country is full of successful farmers and fruit growers, nevertheless. This country has something to sell every month in the year, but the commodities are not all furnished by one class of producers, though each does well in his specialty.

"Building up a farm is not an easy job, nor for that matter, is any other undertaking which is successful. Land is cheap, yet it requires some money to buy it. The farm should have a good team, one or two milk cows, two or three sows, and must also be stocked with poultry, for all of which money is necessary. Lumber costs from \$10.00 to \$12.50 per thousand feet, and some money is needed for supplies until the farm produces them. The rest is good hard work,

with the satisfaction of knowing that you are working for yourself and family, and if there are any profits beyond living expenses, they are yours. There is usually timber enough to build the fences, stables, poultry houses, barns, corncribs, feed bins, etc., and the rest is elbow grease. On the farm work is money, is a good appetite and good digestion, good health, long life and a soul content. The planning out of a campaign for the season on the farm becomes more interesting than the campaign for a presidential election, and there is more pleasure in watching the development of a setting of young chicks than there is in watching the hatching of the Chinese republic. The man on the farm finds after a time that he has an object in life, provided he is not afflicted with the 'get-rich-quick' spirit. His farm, stock, horses, cattle, poultry, are not longer objects, but become personal acquaintances, about whose individual welfare he is more or less concerned, not because they are worth so many dollars, but because he likes them, and the same is true of his trees, his growing cornstalks, berry or truck patches. His neighbors, and he knows every man, woman and child within a radius of ten miles, are similarly interested, but this need not lead to the conclusion that all conversation between rural neighbors is 'shop talk.' Few of the average city dwellers' houses are so well supplied with the literature of the day as are the farm houses in a fruit and truck growing neighborhood, and it is easier to sell a gold brick any day in the city than it is in the country. The farmer has time to read and to think, and many of the city dwellers have neither. Socially, life is pleasant and in the country everybody knows everybody else, and lifelong friendships are soon made among congenial spirits, and intellectually the country stands as high as the city. The 'social doings' are not so conventional, and there is a cordiality about a 'kaffee klatch,' church social, 'hen convention' or neighbor's visit that is entirely lacking in the city, where you change neighbors every few months and never really become acquainted with them.

"You can't help noticing the number of chickens you passed on the road. If you didn't, you will notice them about daylight, when every rooster within sixty miles, and each within hearing distance of the other, will let you know that he is among the living. The wireless telegraph is not in it with the rooster when it comes to announcing the arrival of a new day. Poultry and eggs form a very important item all the

year around and contribute a goodly share of the year's income. On a small farm like mine the land must never be idle. The chickens, a few turkeys, the two cows and the pigs furnish much of the living, and our fruit trees, berry and truck patches do the rest. Every year there are some pigs to sell, eggs every month in the year, likewise butter, and occasionally a calf. Our team, cows and two or three sows must have some pasturage, and some land must be allotted to produce their feed. Ten acres, expertly cultivated, will produce all the feed necessary to carry all the stock and poultry a full year, making it unnecessary to buy feed stuffs of any kind. Some crops can be followed with a second crop, and this is done whenever practicable, so as to keep the soil as much employed as possible, and incidentally to enrich it by rotation, so as to bring cow peas, peanuts, or some other legume on each acre. In our section an apple orchard is a good thing, while farther south peaches do well. Between the apple rows, while the trees are too young to bear, there is room for several acres of strawberries, and one or two or three acres should be grown, by all means. To extend the strawberry season, several varieties should be planted. The earliest profitable variety in this locality is the Mitchell. This should be followed up by the Klondyke and then the 'Aroma.' This is by far the best all around berry in this country. It comprises about 95 per cent of all the plantations. For a small general farm the three named varieties would make the berry season last from April 25th to June 10th. Farther south this crop would come in earlier. The money yield in the last three or four years has averaged about \$100 per acre, though hundreds of individuals obtained \$200 to \$450 per acre for their berries. The dewberry, raspberry and blackberry can be planted to great advantage, and one grower at Siloam Springs has netted \$300 per acre for five consecutive years.

"The June apples, which follow the strawberry crop, really ripen here in June. The choice varieties are the 'Red June,' 'Red Astrachan' and 'Early Harvest.' These always bring the best prices and, coupled with early maturing peaches, like the 'Early Crawford' and 'Oliver,' will keep the farmer busy during June. If you have some sheep you can shear them about this time. The Elberta peach matures in July, running over into August. It does splendidly farther south and yields often enough here to be profitable. When we get a crop it is worth

\$100 to \$200 an acre. The 'Maiden Blush,' 'Bell Flower' and 'Oliver' come in about the same time and are good for \$100 to \$150 per acre. During August green corn can be marketed, and young poultry, hatched in March and April, can go to market as 'fryers' or 'broilers.' There are also some peaches to ship. After this come the 'Ben Davis,' 'Gano' and 'Jonathan' apples, which need some attention. The 'Mammoth Black Twig' and 'Arkansas Black' apples are harvested in October. The average value of an apple crop is about \$100 per acre, depending on variety, age of orchard, cultivation and market conditions. Money yields of \$200 and \$300 per acre are not uncommon.

"The wheat crop matures in September, and if you have any wheat the local mills will buy it, or will sell the flour for you. The evaporators and canneries will handle fruit in the same way. The canneries will contract in advance for sweet potatoes, tomatoes and buy much of your fruit. There is always an opportunity for a catch crop of one kind or another, say peanuts, cowpeas, etc., and here, where we have a fruit-growers' association, we can easily produce enough of any commodity for entire carloads of fruit or berries, or mixed carloads of truck, potatoes, cantaloupes, etc., and buy our boxes, crates, baskets, cases, etc., in carloads at the lowest figures.

"The great stand-by on the Ozark farm is the chicken, of whatever breed. It works all the year around. The hens lay well all winter where properly cared for, but begin in earnest about the middle of January and continue until they reach their best all through February, March and the spring months, and they lay well when egg prices are highest. A good bunch of pullets of the March and April hatch make splendid egg-laying machines in December, and from this district we ship eggs in carload lots.

"It is well to have one or two specialties for money-makers on the farm, and berry-growing and poultry-raising, if the transportation facilities are right, are the most promising on a small acreage. As to poultry, any standard breed is good enough. White Leghorns, Plymouth Rocks, Langshans, Rhode Island Reds, Orpingtons and Wyandottes are all of good reputation in chickenland and all are heavy chickens, with good laying propensities, which can be increased by proper handling. The White Leghorn, probably, lays the largest number of eggs when allowed to run at large, but in confinement other varieties will do equally well. The Rhode Island Red, a big

breasted, heavy, handsome fowl, quick in maturing and hardy, will outlay the White Leghorn and in the winter months when eggs bring the highest prices.

"There are several systems and methods for raising poultry, and the man interested should study them carefully as to net results. Good common sense should indicate that poultry should be well housed in dry, clean quarters, that the henhouses should be regularly sprayed for mites and lice; that ample provision is made for air and sunlight and for dust baths; and that the feeding is done right, and fresh water is abundant. Counting one's chickens before they are hatched and figuring on poultry profits, to the uninitiated, belong to the same order of mathematics; yet there is an element of certainty that an intelligent poultry raiser can figure on and get pretty close to his prospective year's income from that source. Prices of poultry and eggs fluctuate, as do the prices of other food-stuffs, and the value estimate of today may not be good next week. Now as to profits:

"Let us take for illustration a flock of 120 hens as a beginning, 100 in the laying pens and 20 for breeding purposes. Your 100 in the laying pens should average 12 dozen eggs a year, or a total of 1,200 dozens. At 30 cents per dozen the income is \$360. The 20 in the breeding pens are your 'crack' layers, and should give you 175 eggs each, or 3,500. Of these you sell 125 dozen for \$37.50. At least 2,000 of these eggs should be laid during the months of January, February, March, April and May, the incubating season. They should be incubated. Say you hatch out 70 per cent, or 1,400 chicks, and succeed in maturing 75 per cent of these, then you would have 1,050 additions to your flock. One-half, or say 525, will be cockerels, which you sell as broilers or fryers at 40 cents each, increasing the income by \$210. Your 525 pullets go into the laying pens.

"Of your original 120 hens you select 20

of the best for breeding, and sell the 100 as butcher meat for \$50 and you have this table of income from your small flock the first year:

1,200 dozen eggs from laying pens.....	\$360.00
125 dozen eggs from breeding pens	37.50
575 broilers and fryers.....	230.00
100 hens, butcher's meat.....	50.00

Total cash\$677.50

"You have in your laying pens 575 fine pullets worth \$1 each and 20 select hens worth \$1.50 each; in your breeding pens, as a start for the second year, easily \$475 more stock than you started with, and which sum, added to the table above, gives a gross profit of \$1,152.50. You could caponize your cockerels and get more than 40 cents apiece for them, and you can frequently sell egg settings or extra fine cockerels at advanced prices.

"Not everyone who goes into poultry-raising gets these results, but there is enough good money in it to make it worth a man's time and attention. Poultry-raising is no 'get-rich-quick' scheme, but a legitimate business, one of small beginnings but of large possibilities. If you start, stay with it. Your income is derived not only from poultry, but from your strawberry patch, your truck patch, your cows and sows, and most of your living comes from the farm and only requires work instead of cash. Store in your cellar and pantry the raw and preserved products of your garden and orchard. I do, and I have an appetite like a farm hand. And with the butter, the milk, eggs and poultry, our own cured bacon and hams and fresh fruit in season, which I have and you can have, you will live better than most rich folks in the city. The man of small means in the city doesn't know what good living is. Just think of having every good thing on the table that you want, without having to figure on the cost of it, and to know that you can have it that way every day in the year."

Some Ozark Counties in Missouri and Arkansas.

The counties described below, excepting Little River and Miller counties in Arkansas, are part of the Great Ozark Plateau, or form part of its western or southern slope. Little River and Miller counties lie in the valleys of Little river and Red river and vary in their general characteristics from

the others. Their altitudes are lower and their topography is more level. There are large areas of alluvial lands, river bottom lands of exceptional fertility, separated by low, smooth ridges, all of which are tillable. For general farming these lands are unexcelled and produce great yields of corn,

cotton, alfalfa, small grain and general field crops.

Newton County, Missouri.

Newton county is the second county north of the Arkansas state line, bordering on the state of Kansas. About one-third of this county is hilly land, the remainder being comparatively smooth, level land lying between more undulating areas. The area is 629 square miles, or 403,000 acres. The general slope of the surface is to the west and in the southern portion to the south. The county is exceptionally well watered, having numerous fine streams and very large springs. Wheat and corn are the principal grain crops, but flax, buckwheat, sorghum, hay, clover, oats and timothy are produced in great quantity. Bluegrass pastures are numerous and nearly all farmers engage in raising horses, cattle, mules, hogs and sheep. An enormous poultry business is done, the town of Neosho alone handling annually about 10,000 dozen of chickens and 5,000 cases of eggs of thirty dozen each. Commercial fruit growing, the raising of apples, peaches, grapes, strawberries and other fruits have reached great development here. Strawberries, blackberries, raspberries, grapes, etc., are shipped as far north as Manitoba, and one of the largest fruit canneries in the state is maintained here and its annual output is very large. There are fruit growers' associations at Aroma, Neosho, Seneca, Tipton Ford and Sarcxie, which look after the proper cultivation, packing and marketing of the fruit and truck crops and handle the business with eminent success.

The production of this county consists of a great variety, covering nearly every line.

Largest production of field crops: Corn, 1,306,233 bushels; oats, 294,418 bushels; wheat, 404,772 bushels; hay and forage, 35,080 tons; Irish potatoes, 102,233 bushels; sweet potatoes, 20,498 bushels; syrup, 18,571 gallons; apples, 55,797 bushels; grapes, 186,925 pounds; berries, 2,956,787 quarts. The value of the cereals produced was \$1,233,987; other grains and seeds, \$9,795; hay and forage, \$272,249; vegetables, \$171,845; fruits and nuts, \$262,057; all other crops, \$95,961; total, \$2,045,894.

The value of farm property in the county is \$14,786,459. The acreage of the 3,215 farms in the county is 304,494, of which 219,729 acres are improved. The average farm contains 94.7 acres, is valued at \$4,599, and the average value per acre is \$33.97.

Newton county is in the zinc and lead region of Missouri, and mines have been in steady operation since 1854 and a smelter is maintained at Granby, Mo. Tripoli, an infusorial earth, used in the manufacture of grindstones, abrasive powders, filters and other purposes, is found in large quantity and manufactured in two establishments.

Many clear, sparkling springs are a feature of the county. The principal rivers and streams are, Clear, Shoal, Indian, Oliver, Hickory and Lost creeks. Timber for home consumption is abundant, consisting of oak, hickory, walnut, etc.

The railroads traversing the county are the Kansas City Southern Railway, the St. Louis & San Francisco, and the Missouri & North Arkansas railways. The county roads consist of 25 miles of macadam and gravel roads and about 700 miles of dirt roads. Some of the finest drives in the state can be found in this county. The towns are Neosho, population about 4,000, county seat; Berwick, Cartmell, Christopher, Diamond, Granby, McElhaney, Newtonia, Racine, Ritchey, Saginaw, Seneca, Spurgeon, Stella, Sweetwater, Tipton Ford, Wanda and Wentworth.

Neosho is a beautiful little city of 4,000 people, with many substantial business blocks built of brick or stone and a fine residence district with numerous attractive dwellings surrounded by shady lawns and gardens. It has been noted as a health and pleasure resort for many years and is annually visited by hundreds of people from other states who spend the summer months there.

McDonald County, Missouri.

McDonald county forms the southwest corner of the state and is one hundred and sixty-five miles south of Kansas City. The area is 858 square miles, or 371,200 acres. It is more hilly than the adjoining county of Newton and about one-half of the area is suitable for general farming operations. One-fourth of the area, largely in the north half of the county, is high, flat land, originally covered with a heavy forest growth, consisting of several varieties of oak, hickory, walnut, wild cherry, sycamore, maple, ash and locust. A limited growth of pine originally grew in the county, but was removed by the earlier settlers. Four tracts of prairie land aggregating about 38,000 acres, are located near the four corners of the county. The southern part of the county

has more rough, broken land, being more precipitous along the Elk and Indian rivers and Buffalo and Sugar creeks, the most rugged country being in the southeast part of the county. The soil of the prairie lands is a clay loam, varying in color from chocolate to black. The flatwoods soils are generally chocolate colored, some more fertile than others. The hill lands are generally gravelly, but fertile and are splendidly adapted to fruit growing and stock raising.

McDonald is probably the best watered county in the state of Missouri. Great springs burst out from the hills everywhere, forming creeks and rivers, which course through the county in all directions, affording a magnificent pure water supply for human consumption and for live stock. All the streams are full of game fishes and during the summer months this county is the favorite resort for hundreds of visitors who come from the great cities to spend their vacations there. The scenery along the various streams, and particularly along the Elk and Indian rivers, in natural beauty is not equalled anywhere.

The natural pasturage in this county is exceptionally good and forage is grown cheaply. The contour of the country is such that good natural shelter is found everywhere, and of pure water there is the greatest abundance in the numerous swiftly flowing mountain streams found in all parts of the county. Under the circumstances stock raising is a profitable occupation. General farming is the engrossing pursuit of the greater part of the population, but, within a few miles of the railway stations a magnificent fruit, truck, berry and poultry raising industry has been developed; as a matter of fact, nearly the whole 22 miles traversed by the Kansas City Southern Railway form a beautiful succession of apple and peach orchards, strawberry beds and truck gardens, interspersed with small towns and glimpses of river and mountain scenery.

The largest crops produced were: Corn, 508,047 bushels; oats, 115,525 bushels; wheat, 87,694 bushels; hay and forage, 17,507 tons; apples, 52,333 bushels; peaches, 6,264 bushels; berries, 906,071 quarts; nuts, 206,423 pounds; dried fruits, 150,166 pounds.

The taxable value of property in the county is \$3,237,441. The county maintains 72 school districts, with 97 teachers and 4,754 pupils.

The county is traversed by the Kansas City Southern Railway, on which are located the towns of Anderson, Elk Springs, Goodman, Lanagan and Noel, and the St. Louis & San Francisco Railway. Pineville, seven

miles from the Kansas City Southern Railway, is the county seat.

Benton County, Arkansas.

Benton county forms the northwest corner of the state of Arkansas, has an area of 892 square miles or 570,880 acres, an average altitude of 1,200 feet and population of 33,389. It lies on the western slope of the Ozark uplift and has more or less hilly land, though there are also fine large level areas, all in a high state of cultivation. It is, in every sense, a first-class general farming country. The valley lands readily produce from twenty to thirty bushels of wheat, or from forty to seventy bushels of corn per acre. Forage crops of all kinds yield bountifully and horses, mules, cattle and hogs are raised in great numbers and are profitably marketed. The uplands also produce well, but are particularly well suited for the commercial production of fruits, berries, truck, poultry and eggs, and, as a matter of fact, Benton county is more famous for its fruit, berry and poultry shipments than for its general farm products. It is estimated that there are about six million apple trees, two and one-half million peach trees and several thousand acres of strawberries and blackberries in the county. The fruit shipments in an ordinary year run in value from three to three and one-half million dollars and a quarter million might be added for poultry and eggs.

Benton county was originally heavily wooded and still has an abundance of timber suitable for most purposes. Excellent limestone for building or for the manufacture of lime and good clays for brick are found in all parts of the county and indications of oil, lead and zinc have been found in several places. The manufacture of fruit products and dairying are important industries. In this county, as in other fruit growing counties of Arkansas, the fruit shipping towns are surrounded by a dense rural population within two or three miles of the railway station, who are practically town people, but live just outside of the town limits. The natural conditions in Benton county do not require that the farmer shall limit himself to one line of production—that is to say, put all his eggs in one basket. He can grow wheat, oats, corn, clover, timothy, any of the domestic grasses, bluegrass, flax, alfalfa, and potatoes here as abundantly as elsewhere and indulge in

stock raising, poultry raising and in fruit and berry culture besides. He can so arrange it as to have a cash income almost every month in the year, if he properly diversifies his farming operations.

Bentonville is the county seat and has 2,300 residents within the town limits and 3,755 in Osage township; Rogers, a prosperous town, has 3,200 inhabitants, the township 4,476; Siloam Springs, 4,000, the township 5,400; Gentry 1,330, Decatur 560, Gravette 800, Sulphur Springs 800, the township 1,050. All of these are important fruit, berry and poultry shipping points. A visitor to any of them would find it difficult to determine visually where the town ends and the country begins.

Washington County, Arkansas.

This county is not traversed by the Kansas City Southern railway, but is easily reached by way of Westville, Okla., where there is a crossing of the K. C. S. Ry. and the St. L. & S. F. Ry. Washington is a typical Ozark mountain county, lying immediately south of Benton county. It has an area of 975 square miles and a population of 33,889. The general altitude is about 1,500 feet above sea level, and the surface is diversified, having hills, valleys, level plains and rugged places, but nearly all the land is tillable and capable of prolific production. It has numerous small streams and thousands of springs and is splendidly watered and drained. The valley or bottom lands are rich alluvial soil and profitably produce every crop known in the latitude. The hill lands, while fertile, are well adapted to the cultivation of apples, peaches and berries, and the acreage devoted to these crops is nearly as large as in the adjoining county of Benton. The fruit, truck and poultry output of the county in an ordinary year is valued at about \$2,000,000.

The county has an abundance of good timber for building and for fuel, etc., as well as limestone and good clays. There are in all twenty-five towns and one hundred and sixty-five schools in the county. Fayetteville is the county seat and has 4,471 inhabitants and 8,563 in Prairie township. The other larger towns in the county are Springdale, population 1,755; Prairie Grove, 774; Lincoln, 292, and Winslow, 289, all of them important fruit shipping points.

Crawford County, Arkansas.

Crawford county lies north of Sebastian

county and borders on the Arkansas river, and its north line adjoins Washington county. The area is 600 square miles, or 384,000 acres, and the population 23,942; that of Van Buren, the county seat, 3,878. The surface of the county slopes from north to south, the altitude varying from 400 feet on the Arkansas river to 1,600 feet near the north line. The surface is more or less rough and broken, being traversed by numerous streams, which have small but very fertile valleys. The production of corn, grain, cotton, forage and livestock is large and in point of acre yield is as large as in any other county in the state. Van Buren is known in the fruit trade as one of the most important shipping points, on account of its great shipments of peaches, strawberries, commercial truck, potatoes, cantaloupes and melons. Apples are grown extensively on the table lands and higher elevations; peaches produce immense crops and the strawberry production is enormous. The total value of the fruit, berry, potato, cantaloupe and truck crops of Crawford county exceeds \$3,000,000 per year.

The southern half of the county is underlaid with an excellent quality of coal, which is mined in large quantities, and superior brick clays and shales are found in close proximity. Good hardwood timber, suitable for many industrial purposes, is abundant. Points in Crawford county are easily reached by way of the Kansas City Southern railway, through Fort Smith.

Sebastian County, Arkansas.

The area of this county, which lies on the south bank of the Arkansas river and adjoins the east line of Oklahoma, is 542 square miles. The population is 58,278, of whom 34,100 reside within the city limits of Fort Smith. The surface of the county is hilly and undulating and slopes to the north from an altitude of 2,500 feet to 400 feet at the Arkansas river. Along the western border there is some prairie land, but most of the county was originally heavily timbered. There is yet available in large quantity almost every kind of merchantable timber used in the United States. The principal field crops are cotton, corn, wheat, potatoes and forage of various kinds. About 100,000 bales of cotton and sometimes 1,000 carloads of potatoes are shipped through Fort Smith and other stations. Fruit and berry growing is carried on ex-

tensively and in some years 100,000 to 150,000 crates of strawberries and a hundred or more carloads of peaches have been shipped to the great northern cities from this and the adjacent (Crawford) county.

The industrial development of the county has been great and new manufacturing enterprises are started every month. The most important of these are the furniture and woodworking plants of Fort Smith, including great wagon works, the brick manufacturing plants, clothing factories and cotton product mills. Nearly all of Sebastian county is underlaid with semi-anthracite smokeless coal, of which 2,500,000 to 3,000,000 tons are annually mined, representing a value of \$5,000,000 to \$7,000,000. Close to Fort Smith is a great oil and gas field, providing natural gas for light and fuel for Fort Smith and near-by towns, and oil has been obtained in sufficient quantity to warrant the building of a large oil refinery, which is in operation.

Scott County, Arkansas.

Scott, Sebastian, Polk and Sevier counties, Arkansas, belong to the southern section of the Ozark plateau. In their general characteristics they resemble the counties of the northern section, the soils and climatic conditions being similar. The contour of the country is, however, more abrupt, the elevations greater, the hilly areas larger and in some localities there are evidences of former volcanic disturbances which do not appear in the northern sections.

Scott county is located about the center and on the western border of the state, with an area of about 1,000 square miles. It is made up of several wide valleys, running east and west, with an intervening broken, hilly country, ranging in altitude from 600 to 2,700 feet. The greater part of the soil is sandy loam, with red clay subsoil. The lands in the well known Fourche Lafave, Poteau, Petitjean and Dutch Creek valleys are very fertile, and equally productive lands, but not in so large bodies, are found on the creeks and smaller streams of the county. The bottom lands produce with fair cultivation from three-fourths to one and one-fourth bales of cotton, from 40 to 80 bushels of corn, and from 10 to 25 bushels of wheat per acre, without the aid of fertilizers. Scott county will compare favorably with any county in

the production of grapes, apples, peaches, plums, pears, berries, potatoes and almost any variety of vegetables. Apples grown on the highlands are equal in size, quality and flavor with the best grown in the famous apple districts of Arkansas and yield as abundantly. The hilly lands are being largely used for this purpose. Scott county took the highest award at the World's Fair on apples.

The mountain lands also afford excellent stock range, as stock raising is an easy and profitable vocation for farmers in this county. The county is well watered. The luxuriant growth of native grasses on the hill lands is greatly improved by removing the timber and allowing the sunshine to fairly strike the earth. Owing to the short and mild winters, cattle, hogs and other stock are frequently carried through the winter season with very little feed and often no shelter. This class of land is very cheap and much of it is subject to homestead entry. The county clerk or county surveyor at Waldron, Ark., can advise intending settlers on homestead lands. There are in the county seventy-six school districts with school terms of six to nine months, according to population and wealth in the respective districts. Five Protestant demonstrations are represented in the various congregations.

The mineral resources of the county are as yet undeveloped, but coal of the best quality for commercial purposes and in great quantities has long been known to exist in the northern and western portions of the county; but no mining was done except for local needs until the building of the Arkansas Western railway. Since then extensive mines have been opened at Coal-dale and Bates, in the western part of the county. Iron and zinc exist in several places, but are undeveloped. Strong indications of oil are found in several localities. Brick and fire clays are abundant.

The average rainfall in Scott county is about 50 inches per annum and the average temperature 68 degrees. A complete failure of crops has never been known in the county. Prices of farm lands range from the cost of a United States homestead patent to about \$30 per acre.

Polk County, Arkansas.

Polk county is the third county south of the Arkansas river on the western border

adjoining Oklahoma, has a population of 17,216 and an area of 868 square miles. Its altitude varies from 1,000 to 3,000 feet, the surface being rolling, traversed by picturesque ranges of mountains and several large streams. The climate is delightful all the year around and public health is excellent. Nearly all of Polk county was originally covered with forest, though a very large acreage is now in cultivated farms. Yellow pine and all kinds of hardwoods are still abundant and a large sawmill and wood-working industry is carried on in several parts of the county. The annual output of pine lumber will probably amount to three-quarters of a million dollars and the output of hardwood timber in the form of lumber, railroad ties and staves will amount to nearly as much. The timber consists of white oak, post oak, red oak, ash, wild cherry, walnut and hickory, and is suitable for furniture, berry crates, boxes, handles, hubs, and all kinds of buggy and wagon timbers, cooperage stock, etc., and is present in sufficient quantity to supply the needs of manufacturing concerns for years to come.

The mineral resources of Polk county have attracted the attention of prospectors and investors for a good many years. Good indications of lead, silver, copper, gold and antimony have been found in many places and have been mined in a desultory manner at several points. Antimony and zinc ores have been shipped to the smelters occasionally, but no permanent mining industry has as yet been established. Iron ores and manganese ores are found in many places in the county. Their commercial value has not yet been determined. The greatest slate deposits in the United States are present in this county. It has been definitely determined that there is more red slate in Polk county than there is black slate in Pennsylvania and Vermont. There are great deposits of red, green and black slate in the county, beginning eight miles east of Mena and extending eastward thirty-five miles. Three slate companies have extensive quarries opened and are quarrying and shipping slate through Mena, Ark., in the form of roofing slate, switchboards, wainscotings, etc., etc. Novaculites, suitable for abrasives and for sharpening fine tools, are abundant in many places and indications of asphalt, coal and oil deposits are present in several localities.

All the streams of Polk county originate in the county, which is entirely free from stagnant water or mosquitoes. Small ranges

of mountains cross the county in places, but probably three-fourths or more of the area is tillable and perhaps half of it is in cultivation. The surface soil is composed of about equal parts of clay and sand and the subsoil is in general a deep red clay. All the new land is not only very fertile, but the old land, even after years of cultivation, is capable of producing great results, if properly handled. All the field crops of Arkansas are successfully grown and very few sections of country are so well adapted to the profitable raising of horses, mules, cattle, hogs and sheep as is this county. The native pasturage is excellent, the water of the purest and the best in the United States, and forage can be cheaply grown in any desired quantity. By reason of its altitude, Polk county produces most excellent winter apples in large quantity and with greater certainty than do the sections generally credited with superiority in apple production. Being protected by the mountain ranges, fruit is seldom injured during the winter, and peaches will ordinarily yield a fine crop when they fail elsewhere. The shipments from Polk county will run, in an ordinary year, from 5,000 to 15,000 bales of cotton, 10 to 30 carloads of apples, 6,000 to 10,000 cases of eggs, 90 to 150 carloads of cattle, 15 to 30 carloads of hogs and considerable shipments of peaches, cantaloupes, strawberries, poultry, etc. As the home consumption is large, only a small part of the total production is shipped away.

Sevier County, Arkansas.

Sevier is the most southerly of the Ozark counties along the Kansas City Southern railway. It borders on Oklahoma for 17 miles and its south boundary is about 20 miles north of Red river and the Texas state line. It lies in the southern foothills of the Ozark plateau and its general slope is south and southeast. The north one-third is part of the plateau, but from Gillham station southward the altitude decreases rapidly and from the southern boundary of the county an unbroken plain slopes gently to the Gulf of Mexico. Protected by wooded hills for many miles in every direction, except southward, the county has little to fear from either drouth, late frosts or storms. The county is well watered and well drained. On its east boundary is Saline river and on the south boundary Little river. The Cosatot and Rolling Fork rivers cross the

county from north to south, emptying into Little river. Numerous tributaries, fed principally by perennial springs, flow into all four of these rivers. The area of the county is about 600 square miles or 384,000 acres and about 80 per cent of it will be tillable when the standing timber has been removed.

About one-half of the soil in the county is red, the color being due to the presence of iron, which gives a rich color and flavor to peaches and other fruits. Some of the red land is gravelly and some is sandy. Both kinds have a subsoil of red clay. There are two kinds of black land in the county. One is a black sandy loam, found principally in the river and creek bottoms and which is very productive. The other is known as black limeland, found mostly in the lower Cossatot valley, in the southeastern part of the county. It is especially adapted to the cultivation of alfalfa. The climate is one of the best found anywhere, is remarkably healthful and free from extreme and sudden changes. The gulf breezes reach this country and temper the summer heat, which even in the hottest weather does not reach that of some of the northern states. The nights are always cool and refreshing sleep is assured.

Agriculture has succeeded lumbering as the leading industry. Cotton is grown extensively and yields from one-half to one bale to the acre, with a total production of 10,000 to 15,000 bales, valued at \$500,000 to \$750,000. The uplands produce about 25 bushels of corn per acre and the bottom lands about 40 bushels. Oats and millet do well and are grown extensively; wheat, rye and kaffir corn are grown in smaller quantities. Sugar cane yields as high as 700 gallons of syrup per acre; sorghum is grown extensively for molasses and also for hay. Cowpeas and peanuts produce abundantly and timothy, clover and redtop do well in most parts of the county, though not extensively grown. Bermuda grass is excellent for lawns, pasturage and hay and Japan clover is a volunteer crop. hay and Japan clover is a volunteer crop. and tobacco. Two crops of potatoes are grown, the first crop maturing about the end of May. They are shipped northward in car lots. Tomatoes, cantaloupes and commercial truck are grown and shipped in large quantity.

All varieties of peaches do well and some of the largest peach orchards in the United

States are located in this and the adjoining counties. The Southern Orchard Planting Company's peach orchard between De Queen and Horatio, this county, has over 3,000 acres in peach trees, all bearing, and there are 5,000 to 6,000 acres more at other railroad stations. Early apples do well, plums, apricots, cherries, figs, grapes, pears, blackberries, strawberries, dewberries, etc., yield satisfactory results.

Stock raising is profitable. Horses and mules, cattle and hogs are being raised in increasing numbers and the grade is being continuously improved. Sheep and goats thrive on the uplands. Poultry of all kinds do well and increasing attention is being given to standard breeds of poultry.

Most of the large game has been killed or driven away, but small game is yet abundant and the streams are full of fish.

The great mineral wealth of Sevier county is as yet undeveloped. In the north third of the county, near Gillham station, are great veins of antimony, and in the same vicinity also veins of lead and zinc ores. Well defined quartz veins containing silver and copper ores in merchantable quantity have been found near De Queen. Iron ore and manganese ores are abundant in the same locality. Good artesian wells are flowing in several places. Oil and gas are indicated in several localities and borings for oil have been made in the southeastern part of the county, where there is also a deposit of asphaltum. Shales and brick clays are abundant and in several places there are outcroppings of lignites, etc.

Most of the timber of commercial value is pine, but there are also available considerable quantities of red oak, white oak, hickory, cypress, sweet gum, red cedar, sycamore, ash and elm. Numerous saw-mills and planing mills are operating in several parts of the county and the output of pine lumber, hardwood lumber, railroad ties, telegraph poles, cooperage stock, wagon timbers, shingles, etc., is very large.

The railway facilities consist of the Kansas City Southern railway, which crosses the county from north to south with a mileage of 29.88 miles, and the De Queen and Eastern railway has a mileage of 21.63 miles in the county and extends on eastward into Howard county. The county roads are good and well bridged. The number of school districts is 68 and the school population 6,222; the population of the county 22,000.

Little River County, Arkansas.

This county is located in the southwest corner of Arkansas, the first county south of the Boston mountains, wedged in, as might be said, between Little river and Red river. Little river, on the north and east, is a small river coming down out of the mountains of eastern Oklahoma, being fed on the way by numerous small streams and springs. Red river, on the south and west, is the boundary line between this county and the state of Texas.

The altitude of Little River county is, in the average, 379 feet above sea level. Lying as it does at the southern base of the Boston mountains (part of the Ozark plateau), it is in a large measure protected against the blizzards from the north in winter. The winters are usually very mild and ice and snow are rarely seen. Good, soft freestone well and spring water is abundant in all parts of the county. In the black land belt the water contains some lime.

There is considerable variety in the soils of Little River county. The valley lands along Red river are of a deep, sandy loam soil, loose and very easily cultivated, and will grow from 50 to 75 bushels of corn, from three-fourths to one and one-half bales of cotton and from four to six tons of alfalfa hay per acre. It also produces other staple crops grown in the south. The valley lands of Little river are of a dark, deep, sandy loam soil and are equally as productive as those of Red river. The remainder of the county is composed of rich, dark, sandy loam upland, with a red clay subsoil, which is fine for fruits, vegetables, melons, berries, sugar cane, alfalfa, potatoes, berries, etc. Cotton has been the crop relied on principally for ready money, but in the last decade there has been a large increase in the acreage of corn, alfalfa, cowpeas and forage plants. The annual rainfall as reported by the United States Weather Bureau at Ashdown is 52 inches, usually well distributed.

Climate, soil, rainfall and length of growing season make it profitable to grow two crops of Irish potatoes on the same land each year. By sowing oats early, say in September or October, a corn and cowpea crop can be grown after the oat crop is harvested. The broad river and creek bottoms are the soil for alfalfa. They are

alluvial soils and the subsoil is usually deep and as fertile as the top soil. Alfalfa with proper sowing, mowing and grazing, will make a continuous meadow, and one that produces the earliest as well as the latest hay, and from four to six cuttings, and three to five tons to the acre. It is practically green all the year round.

The uncultivated acreage in Little River county is still quite large, but within the past five years there has been a large immigration of energetic farmers from the older states east of the Mississippi river, and more permanent improvements have been made than in the preceding years. The farms range in area from 80 to 200 acres or more, and old-fashioned general farming, like the production of small grain, oats, wheat, corn, cotton, alfalfa and forage crops, and the raising of livestock, are the engrossing agricultural pursuits. Fruits and berries as well as commercial truck yield good crops, but the tendency among the farmers is to engage in general farming, rather than special crops. The production of livestock on a larger scale is receiving much attention and the country is splendidly adapted to this purpose. It is only a question of time when this section will become famous for its stock feeding facilities and its shipments of fat beef cattle, hogs, poultry and dairy products.

As to the industrial possibilities in Little River county, there is available an abundant timber supply, which in part is being manufactured. The pine timber in places has been cut out near the railroads, but the supply will last for a number of years to come. Oak, elm, cottonwood, gum, hickory and ash are abundant, and a considerable business is done in the manufacture of cooperage stock, railroad ties and other hardwood products. A cottonseed oil mill, already in operation, could to advantage be enlarged and manufacture fertilizers. Strong oil and gas indications have been found in several places and test borings for oil or gas are being made. The raw material for Portland cement (chalk and cement clay, is present in such quantity that it could not be exhausted in five hundred years.

The population of Little River county is about 15,000; the land area 349,440 acres, 47 per cent of which is in farms and in cultivation. There were in 1910 two thousand and twenty-one farms, the value per farm being \$1,547. The average value per acre in 1910 was \$12.42. Good, partially

improved bottom land sells for \$15 to \$45 per acre; other lands from \$10 to \$25.

The educational conditions are good, each district having from three to eight months free school each year, and the special districts, a nine months school every year. The school system is supported by state taxation. The county has good transportation facilities, being traversed by the Kansas City Southern railway from north to south and the St. Louis & San Francisco and the Memphis, Dallas & Gulf railways from east to west.

Ashdown, population 3,000, is the county seat and principal shipping point. It handles from 12,000 to 20,000 bales of cotton a year and ships corn, cattle, horses and mules, hogs and large quantities of pine and hardwood lumber, barrel staves, wagon stock, railway ties, etc., etc. Along the Kansas City Southern railway are the towns of Winthrop, population 1,000; Wilton, population 700; Ogden, population 800, and Allene, population 300. All of these places ship lumber, cotton, livestock, poultry and truck.

Miller County, Arkansas.

Miller county is in the extreme southwest corner of the state. Red river bounds it on the north and east; Bowie and Cass counties, Texas, on the west, and the state of Louisiana on the south. It has an area of 398,720 acres, a population of 19,555 and an average altitude of 297 feet. The earliest settlers came from Kentucky and Tennessee about 1817 or 1818 and found the country heavily wooded and teeming with game. Miller county was marked out and established in 1820, though the location of the Texas boundary was but vaguely defined. It was named after Governor James Miller, the first governor of the territory of Arkansas, and was organized in 1874 with an area of 665 square miles.

About 85 per cent of the area is tillable and an exceptionally large percentage of this is very rich bottom land, found in the valleys of Red river and Sulphur Fork river. In point of fertility, these bottom lands are not equaled anywhere in the United States. They produce splendid crops of corn, cotton, alfalfa, small grain and forage crops of all kinds. The rolling uplands produce similar crops in somewhat smaller quantity. They produce also most excellent crops of fruits of all descriptions except winter apples, and are well adapted to commercial truck growing.

The soil in Miller county ranges from a dark alluvial in the Red and Sulphur river valleys to a light sandy loam with a clay subsoil in the uplands. There are five important soils in the county, which are described in detail, with their possibilities, in a soil survey of Miller county published by the United States Department of Agriculture, which will be furnished anyone upon request.

The annual rainfall is about forty-six inches. Drouths are unknown. There has been but one four-inch shower in twenty years. The springs and autumns are long and pleasant. Pure freestone water can be obtained at depths of twenty to forty feet at a cost of 75 cents to \$1 per foot. Generally, the health conditions are excellent. The climate is mild and agreeable and public health is very good.

Where not used for the cultivation of field crops, the country is admirably suited to stock raising. The natural pasturage lasts about ten months in the year and very little shelter for live stock is required. Hogs do exceptionally well in this region. They run upon the mast until nearly Christmas and are fed the rest of the year. More recently systematic feeding, as carried on in the north, has been introduced, because improved hogs have been brought into the country. All kinds of live stock do well here and poultry raising is profitable.

The cotton crop has heretofore been the principal reliance for ready money, but during the last decade other crops, notably corn, oats, cowpeas, alfalfa, peanuts, Irish and sweet potatoes, and ribbon sugar cane have received much attention. The increase of live stock has promoted the cultivation of grain and forage and other crops have been profitably marketed. The tendency has been to diversify the crops and results are obtained now which were deemed impracticable a few years ago.

In addition to its abundant agricultural and horticultural resources, and facilities for raising live stock, the county is still rich in timber. The pine timber, formerly very abundant, has been, in a large measure, removed, but there is still available in large quantity white oak, red oak, cypress, ash, walnut, sweet and sour gum, cedar, cottonwood and hickory. Lignite and indications of oil and gas have been found in many places and good clays and shales for brick making, terra cotta, fire brick, sewer pipe, drain tile, pottery and other purposes are very abundant. Gas pipe lines follow the right-of-way of the

Kansas City Southern railway and fuel is very cheap. The county is traversed by the Kansas City Southern, the St. Louis, Iron Mountain & Southern, and the St. Louis-Southwestern railways, affording an outlet to all the great markets of the United States. There are over fifty miles of first class graded roads in Miller county and about \$25,000 per year is expended in maintaining and extending them. About \$300,000 has been expended in drainage work in the past two or three years.

In 1910 there were in the county 1,936 farms, embracing 181,636 acres. The value of all farm property was \$3,310,606, showing an increase of 90.1 per cent over the census figures of 1900. The land was valued at \$2,022,331, the buildings at \$572,908, implements and machinery, \$115,800, live stock and poultry \$599,567. The average value per farm was \$1,667; average value

of buildings per farm \$1,307; average value of land per acre \$11.13. The tax assessment for 1914 was: City of Texarkana, \$4,017,700; Miller county, outside of city, \$4,208,160; total, \$8,225,860.

Miller county has a number of small towns, most of which are situated in the central and eastern parts, which were first provided with railway transportation. The Kansas City Southern railway skirts the western boundary and passes through the largest city, Texarkana, which is situated on the state line between Arkansas and Texas. Ravanna, a busy village of about 300 people, is the next important railway station and is twenty-four miles south of Texarkana. Its shipments of surplus products consist of hardwood lumber, railroad ties, live stock, cotton, poultry and eggs, and in season berries, potatoes, fruits and early truck for the northern markets.

Cantaloupes, Peaches and Horatio, Arkansas

Horatio, in Sevier county, is an old town. It was built long before Sevier county had a railroad and, in fact, was the first town in the county to be supplied with railway facilities. It had been a trading point for many years for a large scope of country, which shipped its cotton by way of Horatio and the Little River boats to Shreveport and beyond. Supplies for the towns in Sevier county were brought in the same way. In the olden days, when transportation was slow, tedious and difficult, cotton was the chief commodity upon which the inhabitants of Sevier county depended for ready money. It was not easily perishable, could bear rough handling without depreciation and could be stored for an indefinite length of time.

With the building of the railway came a new era. The development of the lumber industry, the growth of the older towns and the building of new towns created a demand for agricultural products, which in former years were grown for home consumption only. Southwest Arkansas, including Sevier Little River, Miller, Polk, Howard and Pike counties, took up diversified farming in earnest and today is a producer of fruits, truck, poultry, fine live stock, cotton, forage crops on a very large scale. Sevier county is only one of these, yet its fruits, cantaloupes and vegetables are well known in most of the northern markets. It has about 10,000 acres in peach trees and probably as many

more in cantaloupes, strawberries, melons and commercial truck.

Horatio has between 1,800 and 2,000 inhabitants and fifteen firms, with merchandise stocks valued in the aggregate as about \$80,000. From 1,500 to 2,500 bales of cotton are shipped from this point annually, yielding a revenue of \$75,000 to \$125,000. The peach crop runs from 100 to 500 carloads, and the strawberry crop about thirty or forty carloads. The cantaloupe shipments of 1916 amounted to more than two hundred and eighty carloads, in addition to which there were shipped more than one hundred and fifty carloads of peas, snap beans, radishes and other commercial truck. The poultry and live stock shipments are fairly large.

The average value per car of cantaloupes has been about \$600. Many of the growers have netted \$150 per acre and only a few have fallen below \$100 per acre. Some of the strawberry growers have had yields as high as \$300 per acre.

Soil and other conditions are similar to Horatio, at Lockesburg, DeQueen and Gillham in the same county. The Lockesburg Fruit Growers' Association shipped about fifteen carloads of peaches and the association at DeQueen made large shipments of peaches and cantaloupes. The Knod Fruit & Truck Company at Gillham, Ark., shipped some forty or more carloads of peaches, berries, cantaloupes, potatoes, beans, radishes and other vegetables.

Miscellaneous Mention

NATURAL GAS FOR MANUFACTURING PURPOSES.

Natural gas, if available in sufficient quantity, is the most clean, economical and easily controlled fuel which can be used in manufacturing processes of any kind. Its easy regulation in the furnace makes it almost invaluable where a steady heat of great intensity is required, as in the smelting of metals or the manufacture of clay products, etc.

The city of Fort Smith, Ark., splendidly located as a manufacturing center, with abundant raw material available and excellent transportation facilities, has in its immediate vicinity not only an almost unlimited coal supply of the best quality, but also an enormous supply of natural gas. On August 1, 1916, there were available in the vicinity of Fort Smith and carried to that city in pipe lines a supply of 146,000,000 cubic feet of gas per day, the same controlled by the following named companies: Wild Cat Oil & Gas Co., 60,000,000 cubic feet; Clear Creek Oil & Gas Co., 50,000,000 cubic feet; Oklahoma Producing Co., 10,000,000 cubic feet, and Crowe Oil & Gas Co., 26,000,000 cubic feet.

The average rock pressure in the gas wells is 260 pounds per square inch. Since this supply has been developed other wells have been brought in, and the producers are in position to guarantee almost any quantity desired. With this abundant supply of cheap fuel and a large variety of raw materials available, there are good openings for manufacturers in various lines. The Kaolin deposits in Pike county are in all probability suitable for the manufacture of porcelain ware; iron works, glass works, clay product manufactures could be established to advantage. Three great zinc smelting plants have already availed themselves of the opportunities presented.

THE RICE CROP OF 1916.

The acreage planted in rice for the year 1916 amounted to 868,172 acres in the United States. Of this acreage 232,126 acres were in Texas, 439,544 in Louisiana, 118,602 in Arkansas, 7,900 in the Atlantic Coast states and 70,000 acres in California.

The rice acreage in Texas, Louisiana and Arkansas for 1916 is greater than it was in 1915. Louisiana has an increase of 40,544 acres and Arkansas an increase of 28,602 acres. In Texas there was a decrease of 22,874 acres, but the total increase for the three states was 46,272 acres. In California the acreage was increased from 33,000 acres in 1915 to 70,000 acres in 1916.

CITRUS FRUIT ON THE GULF COAST.

There are now something over 7,000 acres of bearing orange and grape fruit trees in the Gulf Coast country of Texas and about as many more in Southwestern Louisiana. Texas had about 100 carloads to ship, and had it not been for the tropical storms of August, whipping the leaves from the trees, a production of 1,000 carloads would have been expected.

Of the 7,000 acres of bearing orchard about 800 are Satsuma oranges, 300 are in grape fruit, 300 in round oranges, 50 acres in lemons, 25 acres in kumquats and the rest in miscellaneous citrus fruits. There are about 2,000 individual growers.

The heaviest producing section in Texas is the neighborhood of Alvin, including League City, Dickinson, Algoa and Webster. There is also a considerable acreage in the lower Rio Grande Valley, including Falfurrias, but in this section grape fruit is the preferred fruit. Last season the Falfurrias district shipped more than 30 carloads of grape fruit and expects to do better this season.

In Western Louisiana oranges are produced at Bon Ami, at Lake Charles and at Johnson Bayou, Grand Chenier and other places in Cameron Parish scattered through Calcasieu, Beauregard, Allen, Arcadia parishes, there is a considerable acreage which is being augmented from year to year. Up to within a year or two the large cities of the coast have consumed the local production, but during the present and in coming years a large part of this crop will go to the northern cities.

BENTON COUNTY APPLES

H. E. Woods, Bentonville, Ark.

That fruit growing is a leading industry in Benton county, Arkansas, no one will dispute. To dispute this well known fact would naturally start an argument, arraying prejudice against fact. If you are not entirely familiar with the situation, enquire of the railroads about the tonnage of the fruit shipments, or "the trade" about the magnitude and value of the fruit they handle. They can tell you how Benton county stands as a commercial fruit producer and then you will readily acknowledge our right and title to be known as "The Land of the Big Red Apple."

Just to provide a little food for thought along this line, I will repeat in part some statements I made last season. The 1914 apple crop of Arkansas was estimated at about five million bushels for the whole state. Of this five million bushel production, I feel safe in asserting, that much more than one-half was grown in Benton county. I have not available the actual figures on the shipments of the whole county, but figure that when one shipping point alone handled about one-twelfth, or 333,000 bushels of the crop, the other shipping points in the county will easily verify the estimate. There are other apple producing counties in the state, and there are quite a number of apple shipping points in Benton county, and all of these ship in large quantity, too, and the county's aggregate shipments exceed those of any of the others. The number of orchards in the county, the number of trees in the orchards, some seven or eight million of them, the vast quantity of apples transported over the railways make it self evident that Benton county produces and ships the majority of Arkansas apples.

Not only are we growing more apples than any other county in the state, but we are growing a better apple. As a matter of fact, a better apple in flavor is grown here than anywhere else in the world.

Did you ever eat one of these Benton county apples? Well, if you haven't, you should. Once eaten, always eaten. You will acquire the habit of asking for apples from Benton county.

That is to say, you get this habit, if you get the right impression, by getting the right sort of apple to start with. You should get a really representative apple. Let me describe such an apple to you if I can. In the first place I refer to good eating apples, and not to some of the vegetables passed off on the market for "Ar-

kansas apples." I am referring to what the trade calls "variety stock," meaning not Ben Davis or some of its kindred varieties. Uncle Ben is hard to beat for cooking and keeps a long time in good condition, and is red. But now, try a Jonathan, for instance. Get a fair sized apple, one that is well colored, a well formed, tight skinned apple. In other words a fair sample, a well formed apple of fair size, shape and color. If you bite into it, you won't be chewing a semi-tasteless, woody-pulpy mass that was labeled "apple." You will be enjoying one of Nature's greatest productions—an apple grown in "The Heart of the Ozarks."

Strange, isn't it, how Nature has smiled on us? There are many other places trying to grow apples without that smile. Do you know that the good flavor was put into that apple by Nature? The grower didn't do it. He may swell his chest, look wise and graciously accept the compliment, when you tell him that the apple was good, but he didn't put the flavor into it. No grower, anywhere, does that, though with proper care and attention, the grower can add a little bit to the size and the color. It is the soil and the climate provided for us that make Arkansas apples. The poorest product of a badly neglected orchard in Benton county has at least a fair share of that same flavor.

Our annual rainfall of something over forty inches supplies our growing apples with the right amount of moisture. That is what makes them so juicy and pleasant to eat. Our average summer temperature of about seventy-six degrees, coupled with the sunshine between showers, put on the color and make our fruit so attractive to the eye. Our altitude and latitude give us these ideal conditions.

The combination of soil, rainfall, sunshine and altitude peculiar to the Ozark region, provide all that which will tempt you to say "This apple has the real apple flavor."

And this "real apple flavor" is what makes our fruit so popular in the market and in the home. Properly packed and graded, so as to make an attractive package, Benton County apples will "go" in any market.

At a meeting of the Rogers (Ark.) Fruit Growers' Association in July, it was estimated that the apple crop of the state of Arkansas in 1916 would amount to about 1,500 carloads, nearly all of the crop coming from Benton and Washington counties. The Ozark strawberry amounted in all to 2,300 carloads.

Railway Economics

SOME FACTS AND FIGURES PERTAINING TO RAILROADS.

Very few people can form any conception of the magnitude and vital importance of the transportation systems of the country, even when all the facts and figures pertaining to the same are presented. The transportation facilities are as necessary to the welfare of the country's agriculture, commerce and industries as is the blood that circulates in the individual citizen.

Railroad transportation is a comparatively new factor in the world's affairs. Prior to the year 1828, railroad transportation was unknown in the United States. Today, according to the report of the Interstate Commerce Commission for the fiscal year ending June 30, 1914, the last figures compiled, there were in operation 256,547 miles of main line, and a total of 387,208 miles of all tracks; 64,760 locomotives, and 2,503,822 cars engaged in the business of transportation.

The track mileage alone would girdle the earth, figuring the earth's circumference as 25,000 miles, about $15\frac{1}{2}$ times. The locomotives and cars, if placed in one train, would measure about 20,195 miles and would reach from San Francisco to New York and back again three and one-sixth times. If this train was moving at the rate of 20 miles per hour, it would require 42 days of 24 hours each, to pass a given point.

In this industry there are invested approximately twelve billion dollars in mortgaged debts and eight billion dollars in capital stock. Approximately thirty-five per cent of the capital stock paid no dividends whatsoever, and about twelve per cent of the funded debt paid no interest.

The railroads of the United States transport annually more than one billion passengers and nearly two billion tons of freight. The gross receipts were about three billion dollars, and the gross operating expenses about two billion two hundred million dollars.

Of the entire railroad mileage length of line in the world, 37.6 per cent are in the United States, yet we have but 6.9 miles of railroad per 100 square miles of territory compared with 18.7 miles in Germany and 19.3 miles in the British Isles, indicating a vast portion of our country to be in need of additional railroad mileage, which must be constructed in order to bring all of our territory into proper commercial relations and to give our increasing population railroad facilities.

Some idea of the increase in the business of transportation between the years 1904 and 1914, a period of ten years, may be obtained from an examination of the following figures, showing the mileage, capitalization and other statistics incident to railroad operation in the United States:

	1904	1914
Mileage, all tracks.....	\$ 297,073	\$ 387,208
Capitalization	13,000,000,000	20,000,000,000
Passengers carried	715,000,000	1,050,000,000
Freight handled, tons.....	1,310,000,000	1,976,000,000
Passenger mileage	22,000,000,000	35,000,000,000
Freight mileage	174,500,000,000	288,000,000,000
Locomotives	46,743	64,760
Tractive power, pounds	1,052,307,261	1,931,953,982
Number of cars.....	1,798,561	2,503,822
Capacity freight, cars.....	50,759,133	90,977,098
Average capacity per car, tons.....	30	39
Total cost equipment.....		\$ 3,573,729,300

The foregoing statistics indicate a growth in mileage of all tracks of 30 per cent; in capitalization of about 54 per cent; in passengers carried of about 47 per cent; in tons of freight handled of about 51 per cent; in passenger mileage of 59 per cent; in freight mileage of 65 per cent; in number of locomotives of 38.5 per cent; in tractive power of locomotive of 83.5 per cent; in number of cars of 39 per cent; in capacity of all freight cars of 79 per cent; in average capacity per freight car of 30 per cent.

The Interstate Commerce Commission's report for these two years (1904 and 1914) shows that in 1904 there were employed 1,296,121 persons by the railroads of the United States, and in 1914 the number of employes had reached 1,710,296, an increase of almost 32 per cent. The total railroad payroll in 1904 was \$817,598,810; in 1914 the payroll amounted to \$1,381,117,292, showing an increase of 68.9 per cent. To put this statement into a more concrete form it might be stated that out of the total operating revenues of the railroads in 1904, amounting to \$2,188,108,081, 37% per cent was paid out in wages. In 1914, out of \$3,047,019,908, total operating revenues, 45.3-10 per cent, or \$1,381,117,292 was paid out in wages.

The average daily wage of all employes of the railroads of the United States in 1914 was in the neighborhood of \$2.56. The same average in Germany, the highest paid employes in all of the European countries, was but \$1.10 per day, and in the British Isles but 70 cents.

In 1904 the average receipts per ton mile for freight handled in the United States was 7.8 mills, while in 1914 it was but 7.33 mills, showing a reduction of 6 per cent. In 1904 the average receipts per passenger per mile was 2.006 cents; in 1914 this figure had decreased to 1.982 cents, a reduction of a little more than 1 per cent.

Every thing railroads have had to purchase during this period of ten years, labor, supplies, new equipment, station buildings, repair work, etc., has materially advanced in price. The product the railroads had for sale, transportation for passengers and goods, however, did not advance in price, but became cheaper than ever before in the history of railroad transportation. This reduction in railroad revenues has made the margin of profit so thin that just at this time it seems impossible for railroad managers to secure the money needed to provide additional mileage or replace wornout trackage and equipment. Very few railroads have been able to rebuild their lines

from their income. The means for new lines or rebuilding of old lines was usually derived from sales of stock or interest bearing obligations. These are, however, no longer attractive to those who invest money in railroads and the business of the country, which includes the activities of the farmer, stock raiser, miner, merchant and manufacturer is suffering seriously because of that fact.

The foregoing enumeration of facts, indicates plainly enough that the railroad business in the United States is a growing business and a business which is absolutely necessary to the welfare of the nation. People travel more than ever and the volume of goods transported is greater than ever before, but railroad building has almost ceased, the total construction being less per year than it was during the period of the Civil War. The data above given also indicates that while the railroads are rendering to the public a greater service than ever heretofore, they are rendering this service for less compensation than ever before. Any line of business, which enjoys a growing demand for its products and is capable of indefinite expansion is ordinarily deemed prosperous. All lines of business which are prosperous are balanced in themselves. There is always maintained a certain ratio between the operating expense, the cost of the product and the income derived from the disposal of the product. If there is any expansion the ratio is nevertheless maintained in the natural course of business.

In the railroad industry this ratio of cost of product and of value of product is out of proportion, and until this ratio is placed in proper proportion it is doubtful whether or not any further expansion of railway mileage can take place. Under existing conditions private capital must supply the means and investors in railway securities see nothing attractive in the present situation. The reduction in railway earnings was not a natural result incident to the business, but was arbitrarily made by the various authorities without study or thought of the attendant conditions.

Private enterprise has secured for the country a most magnificent system of railroads, and this on a smaller capitalization and with lower rates for the traffic handled than is found in any other country on the globe. Left to its own resources the growth of this system would have continued indefinitely. Nobody believes that the transportation business of this country is going to stop at its present basis, but rather will continue to grow as it has grown in the past.

At present the transportation facilities must be furnished by private capital as heretofore and unless it is so furnished the growth of business in the country will be hampered and retarded. Under the conditions now existing private capital cannot feel that it can as safely invest in railroad securities as it can in agricultural, mining or manufacturing ventures. In the latter class of investments they have a voice in the management, but they do not invest in railroad securities because the latter are subject to the directions of too many managers in the shape of state legislatures, state railroad commissions, labor union organizations, etc., who place the investments beyond the control of the investors. The railways do not object to intelligent supervision of their affairs by a competent national commission, that is able to view the problems arising without favor or bias, but forty-eight state legislatures and a similar number of state commissions asserting the right to make rates, and a number of trade unions trying to regulate the operating expenses, make the investor feel doubtful as to the safety of his money. Never in the history of the United States has there been so much money available for investment as there is today. The great investment companies are seeking all sorts of opportunities for investing the money of their clients, and vast amounts have been placed in farm loans and into manufacturing ventures, municipal loans, etc., but very little, if any, goes into railroad ventures and is not likely to go until the investor can have the assurance of not having to feel "that a fool and his money are soon parted."

RAILROADS STANDING STILL.

Transportation Is Lagging Behind Industrial Growth.

"Our railroad facilities are wholly inadequate.

"The year 1915 saw less new railroad construction than in any other year since the Civil War. Today railroad managers, though eager to go ahead with railroad development, are making only such improvements as are absolutely necessary to take care of business definitely in sight.

"No matter how wise may be their foresight, railroad managers are unable to make provision for the needs of the future. They can't get the capital.

"Newspapers talk of \$20 coal in New York because there are not railroad facilities

to haul enough coal to market. The Interstate Commerce Commission is holding an inquiry into the acute nation-wide car shortage.

No New Stock Issues.

"Since January 1, 1916, not a single dollar of new railroad capital stock has been listed on the New York Stock Exchange. The year 1916 promises to be the first year since railroads were invented in which no new money for railroad construction will have been put into new railroads by investors willing to take their chances on the success of the enterprise.

"Every dollar of money raised from investors for railroad construction this year has been from the sale of bonds.

Plenty of Money for Factories.

"During the twenty-seven months since the war started, new capital issued by industrial companies to produce war munitions, manufacture dyes and chemicals, operate shipping companies and develop oil and gas resources, amounted to \$879,557,000.

"In other words, our industrial development is going ahead by leaps and bounds; our railroads are standing still.

"And this is a year in which railroad net earnings have been greater than in any previous year.

"Investors are not willing to take chances in providing capital for new railroad property because the schedule of railroad rates is practically rigid, but expenses are constantly increasing.

"Since 1907, when the Interstate Commerce Commission began to regulate railroad accounts, upward of five billion dollars in new money has gone into increased and improved railroad facilities.

"With those facilities the railroads have supplied an enormously increased service to the public.

"But such has been the increase of expenses necessary to handle the new business that in only three of the years since 1907 has railroad net operating income been equal to what it was before that vast sum had been spent.

"People put their savings where they like, and if railroads are to compete successfully for the world's available new capital, they must offer earning power equally as attractive as afforded by other avenues of interest.

More Railroads Needed.

"The American people must have new railroad facilities. They cannot, they will

not, permit their commerce to be throttled by inadequate facilities.

"The sole factor, therefore, which will determine whether or not we are going to be willing to allow the railroads to earn sufficient profits to attract private capital into the development of existing railroads and the building of new railroads. If not, government ownership is certain.

"Our railroad development is as yet very incomplete. France has one mile of railroad for every 8.5 square miles of territory; we have one mile for each thirteen square miles. There is only one double track railroad west of the Missouri river.

"Building new railroads into pioneer territory means taking chances. If future railroad development in this country is to be by the government, it means the nation will go into speculation on a grand scale. That hasn't usually been considered a very wise thing for a government to do.

"Even if that were desirable, our future national development would be inevitably retarded by the red tape, bureaucracy, and lack of 'punch' incident to all government effort. Battleships authorized by congress in 1915 are not yet started in our government navy yards.

"It isn't necessary, and it isn't cheap, for the government to own or operate railroads. But railroads should be regulated in the public interest.

"Regulation will result in the people getting all the profits out of the business other than what is necessary to attract private capital; the premium offered to ability and skill will result in transportation being supplied to the public at the lowest possible cost; indeed, let the reward be greater as the cost to the public is reduced.

"Assurance of due regard to initiative and skill will attract to the railroad business that superior ability and imagination necessary to insure enterprise and efficiency.

"We can get the best and the cheapest railroad service by encouraging private capital to go into the business.

"The need of the hour is for a system of railroad regulation which will see to it that railroad rates are responsive to the commercial demands of the time, that provision is made to meet increasing costs of railroad operation, to pay for the higher standard of operation which the people demand."—From an address by Ivy L. Lee in Boston, Mass., October, 1916.

ONE MASTER FOR RAILROADS.

No solution of the railroad problem can be had so long as the roads are subject to the conflicting regulation of the Federal government and forty-eight states. The passage of the eight-hour law settled a threatened strike, but did not solve the railroad problem. As chairman Walter D. Hines, of the Santa Fe railroad, pointed out in an address before the Investment Bankers' Association at Cincinnati, the railroads have been left in a position "full of danger to the public and full of discouragement to the prospective investor." The practical suggestive suggestions of Mr. Hines include single regulation of rates and wages by a Federal commission, and legislation by which the power to issue stocks and bonds will be derived from the nation and the method of their issue will be supervised by the Federal government. As matters now stand, prospective purchasers of railroad securities have no assurance that their value may not be seriously affected or wiped out by the action of state legislatures or commissioners. Just previous to the stimulus of the war, railroad finances were at a low ebb. In 1915 there was less new railroad construction than in any year since the war between the states. The total of new railroad securities listed on the New York Stock Exchange that year was \$693,000,000. Only \$91,000,000 of this was for new work, the balance being for the refunding of old securities. Out of this small sum for new construction less than \$13,000,000 was secured through the issuance of railroad stock, the balance being bonds or notes. This low-water mark of railroad finances, in which purchasers of railroad securities preferred to be creditors of the railroads instead of partners, has been temporarily remedied by the prosperity that has come through abnormal war trade. When the war prosperity has passed there is danger of a sudden collapse of the railroads to the conditions of 1915. Chairman Frank Trumbull, of the C. & O. railroad, points out that nowhere else in the world do railroads have the handicap of so many conflicting masters, because of which "millions upon millions of dollars which ought to be saved for somebody are going over the dam every year." Whoever is elected president something should be done to assure Federal control of railroads. —Leslie's Weekly.

K. C. S. Railway Employes' Supplement

A NEW RULING BY THE INTERSTATE COMMERCE COMMISSION RELATING TO PASSES ISSUED TO RAILWAY EMPLOYES.

The Interstate Commerce Commission has issued an order effective January 1st, 1917, governing the issuance of passes, interstate or intra-state, by any line to the agents of another line, to quote:

These regulations apply to all carriers of classes designated in the order, whether passes are issued or are honored for transportation wholly within one state or otherwise, and whether the operated mileage or termini of any such carrier be located entirely within the limits of one state or otherwise.

24. Carriers may, at their option, permit their principal officers to furnish passes to officers and employes, and to the members of families of officers and employes, of other carriers subject to these regulations, who are not prohibited by law from using free transportation, without requiring written requests, provided:

(a) That acknowledgements, in accordance with Form 22 hereinafter prescribed, be secured from the persons to whom or on whose account the passes are issued, or from an officer whose name has been filed with the Commission, in compliance with paragraph 3 (b), of the carrier on whose account the passes are issued; and provided further,

(b) That notices, in accordance with Form 23 hereinafter prescribed, be given the carriers on whose account the passes are issued through the officers of such carriers ordinarily authorized to issue requests on other carriers for passes (see par. 68); and provided further,

(c) That the records of the issuing carriers show upon whose authority the passes are issued.

Carriers should be prepared to furnish the Commission, when so required, a full report of passes issued without written requests under the provisions of this section.

25. Notices to other carriers advising of the issuance of passes without written requests must be made in duplicate, or legible impression copies must be taken of them, and the duplicates or impression copies must be retained by the issuing carrier.

26. Requests for passes, also acknowledgements received and copies of notices retained for passes issued without requests, must be filed in the office in which are filed records of annual or term passes or the stubs of carbon copies of trip passes, and in such manner as to be accessible and convenient for examination. The number of the passes issued must be noted upon the faces of the requests.

The important change in the I. C. C. regulations is that lines issuing passes direct to agents of foreign lines must report these passes to the proper official of the line by which the agent is employed.

GRADE CROSSING ACCIDENTS.

Railway Commission Reports 6,000 Fatalities Result of Carelessness.

The number of persons killed at grade crossings and while trespassing on railway property in the United States is about six thousand annually. This is 60 per cent of all the fatal accidents which occur on our railways and is double the number of passengers and employees killed.

Most of the accidents at grade crossings are due to the operation of automobiles, and, as the number of these machines in use is increasing enormously, it is apparent that more attention must be given to this subject.

The railway commission of California has recently completed a thorough investigation and some interesting facts and observations are given by Alex Gordon, a member of this commission, in a recent address before the board of supervisors of that state. He finds that a large majority of these accidents are due to the carelessness of automobile drivers. Out of a total of seventeen thousand motor vehicle drivers, who were observed at railroad crossings, 70 per cent looked neither way before crossing the track; 33 per cent looked in one direction only, and 27 per cent looked both ways. Thirty-three hundred of the drivers ran over the crossings at a reckless rate of speed; only thirty-five drivers stopped their machines before crossing tracks. Five hundred and twenty-five crossing gates were broken by vehicles which were driven into them while they were down.

Commissioner Gordon then draws the following conclusions:

"Meanwhile the existing situation must be met. It has been suggested that the legislature should pass laws requiring all motor vehicles to come to a full stop before passing over grade crossings. In the opinion of many such a law would be unreasonable and because it was unreasonable would not be enforced. The city of Long Beach has an ordinance requiring all jitneys to stop before crossing a railroad track and it is reported to be very successful in its operation, but this is a different matter from requiring all motor vehicles to stop at all railroad crossings in the state, and the difficulties of enforcing it are much less than they would be in enforcing a similar law that was state-wide in its application. To my mind a better suggestion is a law requiring the driver of motor vehicles to drive slowly when approaching an intersection of a track and highway. Such a law

would not be unreasonable. The law-abiding drivers—and I believe they form a large majority—would be careful to observe it and those who would not otherwise respect it would be compelled to respect it by the same officers that make them respect the speed limit law.

"Personally, I have not a great deal of sympathy with the careless driver who gets hurt in a crossing accident. But our figures show that when a driver is hurt or killed three or four people with him are also hurt or killed. Last September may be taken as a typical month. Three auto drivers were killed in the state that month and ten other occupants of the automobiles were killed at the same time. Nine drivers were injured and thirty-seven other occupants were injured. These other occupants of the vehicles struck by trains were in many cases—possibly in most cases—relatives of the drivers, often wives and children, and if the careless driver when left to himself so far forgets the safety of himself and those who are nearest to him as to jeopardize their lives in this fashion, it is time for the law to step in and tell him what he must do to guard them."

Proceeding to the subject of trespassing, Mr. Gordon said:

"In 1914, 5,396 persons were killed in the United States, and 6,176 were injured, while trespassing on railroads, and these figures are about the same as those reported for previous years. The grade crossing problem is one which is met with more or less in all countries, but trespass accidents occur only in the United States. In Europe the property of railroads is no more used for public thoroughfares than are the privately owned ranches and farms in this country. Even Canada, with more excuse than the United States for permitting trespassing in and around railroad tracks, has rigid anti-trespassing laws which are strictly enforced.

"The railroad companies are anxious to have strong anti-trespass laws and in the few states in the East where there are such laws, they do their best to enforce them. But they can not keep people from their property unless laws have been passed and unless, when passed, they are enforced."

In Oklahoma practically every grade crossing accident or injury to a trespasser results in a suit for damages, fostered by professional damage suit lawyers, and in many cases juries assess large verdicts. As all sums paid for damages must come out of the earnings of railroads, and ultimately from the pockets of the public, this subject is one which should receive thoughtful attention.

Land Dealers, Commercial Clubs, and Fruit Growers Associations along the Kansas City Southern Railway.

The Kansas City Southern Railway Company has no lands to sell and is not financially interested in any way in the sale of lands along its line. The following named land and real estate agents are not agents of the Kansas City Southern Railway Company and handle lands entirely on their own responsibility, but are recommended to the Company as reputable men engaged in the real estate business in the various cities and towns along the line.

Acorn, Ark.	B. S. Petefish	Leesville, La.	Thos. C. Wingate
Allene, Ark.	R. L. Johnson	Lockesburg, Ark.	J. G. Gross
Amoret, Mo.	Amoret Realty Co.	Ludington, La.	
Amoret, Mo.	I. B. La Fever	Long-Bell Farm Lands Corp., Kansas City, Mo.	
Amsterdam, Mo.	J. D. Sage	Mansfield, La.	Wilson & Elam
Anderson, Mo.	Geo. W. Mitchell	Marble City, Okla.	Geo. Silk
Anderson, Mo.	R. W. Weaver	Mena, Ark.	Kelly & Stratton Realty Co.
Anderson, Mo.	Anderson Real Estate Co.	Mena, Ark.	Fred Van Wagner
Asbury, Mo.	W. W. Tracy	Mena, Ark.	John H. Hamilton
Ashdown, Ark.	T. M. Weeks	Mena, Ark.	Ozark Land & Investment Co.
Beaumont, Tex.	W. L. Perkins	Mulberry, Kan.	A. Carl
Beaumont, Tex.	Oswald Realty Co.	Neosho, Mo.	R. B. Rudy Sons
Beaumont, Tex.	Guy Junker	Neosho, Mo.	S. L. Davis & Co.
Bloomburg, Tex.	T. J. Hopkins	Noble, La.	O. M. Helm
Carson, La.	Am. Farm Land Co., K. C., Mo.	Noel, Mo.	H. C. Alexander
Cleveland, Mo.	L. N. Kircher	Ogden, Ark.	P. M. VanHook
Converse, La.	G. I. Paul	Oretta, La.	American Farm Land Co., K. C., Mo.
Cove, Ark.	A. M. Parker	Panna, Okla.	W. D. Massey
Decatur, Ark.	J. S. Husaker	Pickering, La.	Pineland Mfg. Co., K. C., Mo.
Decatur, Ark.	H. N. Weaver	Pittsburg, Kan.	Ellis & Stamm
DeQueen, Ark.	Fred J. Leeper	Pittsburg, Kan.	Carlton & Greef
DeQueen, Ark.	Witten & Gilstrap	Port Arthur, Tex.	A. E. Groves
DeQueen, Ark.	Dierks Lumber & Coal Co.	Port Arthur, Tex.	Seaport R. E. and Rental Co.
DeQuincy, La.	D. D. Hereford	Poteau, Okla.	Lowrey & Gothard
DeRidder, La.	Long-Bell Farm Land Corp'n	Poteau, Okla.	Valley Land Co.
	Kansas City, Mo.	Poteau, Okla.	Sam McClure
Drexel, Mo.	J. B. Wilson	Ravanna, Ark.	Ravanna Land Co.
Drexel, Mo.	E. E. Hill	Richards, Mo.	C. W. Wilder & Son
Elizabeth, La.	Industrial Lumber Co.	Richards, Mo.	E. E. Croft
Elk Springs, Mo.	J. A. Truitt	Rodessa, La.	A. O. Andrews
Elk Springs, Mo.	Jno. W. Miller	Sallisaw, Okla.	F. W. Ahrens
Fisher, La.	La Long Leaf Lumber Co.	Shreveport, La.	G. E. Gillmer
Florin, La.	Williams Bros.	Shreveport, La.	C. C. Brooks
Fort Smith, Ark.	Horace G. Rogers	Siloam Springs, Ark.	L. P. Moss
Fort Smith, Ark.	P. H. Thompson	Siloam Springs, Ark.	Farmer & Perry
Fort Smith, Ark.	W. L. Armour	Spiro, Okla.	H. I. Falconer
Fort Smith, Ark.	Arkansas Valley Trust Co.	Stillwell, Okla.	F. A. Black
Fort Smith, Ark.	Lyman Real Estate Co.	Stotesbury, Mo.	A. F. Ford
Gentry, Ark.	Lowell Realty Co.	Stotesbury, Mo.	Cherokee Land Co.
Gentry, Ark.	Gentry Realty Co.	Sulphur Springs, Ark.	S. O. Whaley
Gillham, Ark.	J. J. Roberson	Texarkana, Tex.	W. G. Hancock
Goodman, Mo.	J. O. Pogue	Texarkana, Tex.	LeGrand W. Jones & Co.
Grandview, Mo.	T. L. Robinson	Texarkana, Tex.	M. C. Wade
Granniss, Ark.	Coyle-Wilbanks Realty Co.	Texarkana, Tex.	F. W. Schifflin
Gravette, Ark.	J. T. Oswalt	Vandervoort, Ark.	G. E. Edmond
Hatfield, Ark.	Joe Lewis	Vivian, La.	G. L. Ferguson
Heavener, Okla.	G. Flanagan	Waldron, Ark.	W. H. Wilson
Heavener, Okla.	R. L. Yandell	Waldron, Ark.	S. T. Duncan
Horatio, Ark.	Elberta Land Co.	Watts, Okla.	L. J. Anderson
Horatio, Ark.	H. C. Towson	Westville, Okla.	W. E. Eldridge
Horatio, Ark.	Horatio Land Co.	Westville, Okla.	White & Stanley
Howe, Okla.	H. W. Moreland	Wickes, Ark.	Hammond & Mills
Howe, Okla.	John Begley	Wilton, Ark.	Wilton Land Co.
Hume, Mo.	H. L. Curtis	Winthrop, Ark.	Sessions Land Co.
Lake Charles, La.	Leon Chavanne	Zwolle, La.	H. A. Miner
Lake Charles, La.	J. B. Watkins		
Lake Charles, La.	Prairie Farm Lands Co.		
Lake Charles, La.	Payne Inv. Co., Omaha, Neb.		
Lake Charles, La.	J. D. Pace & Co.		
Lake Charles, La.	C. P. Fullington		
Lanagan, Mo.	R. J. Proffitt		

U. S. Homestead Lands.

Camden, Ark. Receiver U. S. Land Office
Indian Lands.
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COMMERCIAL CLUBS, BOARDS OF TRADE, ETC.

Decatur, Ark.—Commercial Club, Geo. Brusse, Secy.
 Fort Smith, Ark.—Business Men's Club, Ray Gill, Secy.
 Fort Smith, Ark.—Noon Civic Club, Arch Monroe, Secy.
 Gentry, Ark.—Gentry Commercial Club, Clyde C. Fristoe, Secy.
 Gillham, Ark.—Gillham Commercial Club, G. W. Morrison, Secy.
 Gravette, Ark.—Gravette Board of Trade, Herb Lewis, Secy.
 Horatio, Ark.—Horatio Commercial Club, D. P. Beauchamp, Secy.
 Howe, Okla.—Commercial Club, H. W. Moreland, Secy.
 Hume, Mo.—Hume Commercial Club, L. W. Moore, Secy.
 Independence, Mo.—Business Men's League, J. B. Hattan, Pres.
 Joplin, Mo.—Joplin Commercial Club, F. L. Yale, Secy.
 Kansas City, Mo.—Commercial Club, E. M. Clendenning, Secy.
 Lake Charles, La.—Chamber of Commerce, H. B. Bayless, Secy.
 Mansfield, La.—Chamber of Commerce, Wm. Petrie, Secy.
 Merwin, Mo.—Commercial Club, E. E. Shockey, Secy.
 Neosho, Mo.—Neosho Commercial Club, O. F. Brockman, Secy.
 Noble, La.—Progressive League, P. E. Odom, Secy.
 Pittsburg, Kan.—Chamber of Commerce, Geo. W. Kidder, Secy.
 Port Arthur, Tex.—Board of Trade, W. H. Richardson, Secy.
 Poteau, Okla.—Chamber of Commerce, G. A. Morrison, Secy.
 Shreveport, La.—Chamber of Commerce, Geo. T. Atkins, Secy.
 Siloam Springs, Ark.—Young Men's Business Club, O. P. Maxwell, Secy.
 Texarkana, Tex.—Texarkana Board of Trade, F. F. Quinn, Sec'y.
 Texarkana, Tex.—Young Men's Business League, Geo. J. Gray, Secy.
 Vivian, La.—Commercial Club, G. L. Ferguson, Secy.

Truck, Fruit Growers and Farmers' Associations.

Allene, Ark.—Allene Truck Growers' Assn., Mr. Johnson, Secy.
 Amoret, Mo.—Darby Fruit Farm, Chas. S. Glassmire, Supt.
 Anderson, Mo.—Anderson Fruit Growers' Assn., W. Ed. Roark, Secy.
 Ashdown, Ark.—Little River County Truck Assn., Ed. Payne, Secy.
 Beaumont, Tex.—Dairymen's Assn. of Beaumont, J. B. Roberts, Secy.
 Bloomburg, Tex.—Bloomburg Truck Growers' Assn.
 Decatur, Ark.—E. N. Plank Company.
 Decatur, Ark.—Decatur Fruit Growers' Assn., W. L. Robertson, Secy.
 Decatur, Ark.—Holland American Fruit Products Co.
 DeQueen, Ark.—DeQueen Fruit & Truck Growers Assn., T. J. Marsden, Secy.
 Dierks, Ark.—Dierks Fruit Growers' Assn., Aubrey Gore, Secy.
 DeRidder, La.—DeRidder Truck Assn., C. C. Chapman, Secy.
 DeRidder, La.—Long-Bell Demonstration Farm, T. H. Davis, Mgr.
 Geneva, Ark.—Geneva Truck Growers' Assn., Rural Route via. DeQueen, Ark.
 Gentry, Ark.—J. R. Bever & Co.
 Gentry, Ark.—Gentry Dairymen's Association.
 Gillham, Ark.—Knod Truck and Fruit Company.

Goodman, Mo.—Goodman Fruit Growers' Ass'n., Lee Campbell, Secy.
 Goodman, Mo.—Goodman Dairy Products Co.
 Granniss, Ark.—Fruit Growers' Assn., W. E. Taylor, Secy.
 Gravette, Ark.—Farmers' Union, J. E. Bell, Mgr.
 Gravette, Ark.—Fruit Growers' Union, F. F. Crawford, Secy.
 Gravette, Ark.—Marr Canning Co.
 Hatfield, Ark.—Hatfield Truck Assn., J. A. Slote, Secy.
 Horatio, Ark.—Klondyke Berry and Fruit Assn., H. C. Pride, Secy.
 Independence, Mo.—Jackson County Fruit Growers' Assn., Saml. G. Craig, Secy.
 Lake Charles, La.—Southwestern Produce Assn., D. M. Foster, Jr., Mgr.
 Leesville, La.—Vernon Parish Truck Growers' Assn., W. L. Ford, Secy.
 Lockesburg, Ark.—Lockesburg Fruit Assn., S. Dillahunty, Secy.
 Many, La.—Chas. Henry, Fruit and Truck Grower.
 Mena, Ark.—J. Hollister Tull, Agriculturist, K. C. S. Ry.
 Nederland, Tex.—Southeast Texas Truck Growers' Assn., D. G. Reinstra, Secy.
 Neosho, Mo.—Neosho Fruit Growers and Shippers' Assn., F. A. Talclet, Secy.
 Neosho, Mo.—Southwest Missouri Fruit Growers' Assn., Alex Karbe, Secy.
 Neosho, Mo.—Farmers and Fruit Growers Exchange, Geo. Hatzfeld, Secy.
 Neosho, Mo.—Southwest Missouri Grape Growers' Union, Geo. Hatzfeld, Secy.
 Neosho, Mo.—Wm. P. Starke Nurseries.
 Neosho, Mo.—Neosho Canning Company.
 Noble, La.—Noble Truck Growers' Assn., P. E. Odom, Secy.
 Noel, Mo.—Noel Truck Growers' Assn., J. E. Baker, Secy.
 Ogden, Ark.—Ogden Truck Assn., Wood & Hull, Mgrs.
 Oretta, La.—Oretta Farmers' Assn., Tom Gallagher, Secy.
 Port Arthur, Tex.—The Griffing Nurseries.
 Provo, Ark.—Provo Fruit Growers Assn., W. E. Hill, Secy.
 Pujio, La.—Pujio Truck Growers' Assn., Mr. Anderson, Mgr.
 Rose Pine, La.—Rose Pine Truck Growers' Assn., Matt Evans, Secy.
 Sallisaw, Okla.—Cotton Seed Producers Assn., Ira Holden, Secy.
 Shreveport, La.—North Louisiana Truck & Fruit Growers' Assn., H. S. Norton, Secy.
 Shreveport, La.—North Louisiana Canning Co.
 Siloam Springs, Ark.—Siloam Fruit Growers' Assn., V. C. DeVitt, Secy.
 Singer, La.—Fred Warner, A. Rigmalden, Growers and Mfrs. Ribbon Cane Syrup.
 Sulphur Springs, Ark.—Sulphur Springs Berry Assn., J. G. Eberle, Secy.
 Texarkana, Tex.—Texarkana Truck Growers' Assn., D. N. Lathrop, Secy.
 Vandervoort, Ark.—Vandervoort Truck Assn., P. W. Taylor, Secy.
 Westville, Okla.—Westville Fruit Growers' Assn., Geo. Nance, Secy.
 Wickes, Ark.—Wickes Truck Growers' Assn., I. S. Crawford, Secy.
 Wickes, Ark.—Wickes Farm & Orchard Co., J. Bruiston, Mgr.
 Winthrop, Ark.—Winthrop Truck and Fruit Growers' Assn., M. A. Stocker, Secy.

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